

# *Aristotle*

SEMANTICS AND ONTOLOGY

VOLUME TWO



BY

L. M. DE RIJK

BRILL PHILOSOPHIA ANTIQUA

ARISTOTLE  
SEMANTICS AND ONTOLOGY  
VOLUME TWO

# PHILOSOPHIA ANTIQUA

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FOUNDED BY J. H. WASZINK† AND W. J. VERDENIUS†

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L.M. DE RIJK



# ARISTOTLE

# SEMANTICS AND ONTOLOGY

VOLUME II: THE *METAPHYSICS*. SEMANTICS  
IN ARISTOTLE'S STRATEGY OF ARGUMENT

BY

L.M. DE RIJK



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## CHAPTER SEVEN

### PRELIMINARIES TO METAPHYSICAL ENQUIRY

It is commonly held that the structure of the work handed down to us as Aristotle's *Metaphysics* (*Met.*) is a result of the arrangement of several Aristotelian treatises executed by his editors after the Master's death.<sup>1</sup> The work was never read in its present form until the time of the Greek Commentators and their Western colleagues in the Middle Ages, who in the framework of the university curriculum lectured on Books I-II, IV-X, and XII.<sup>2</sup>

Roughly speaking, the work falls into three main parts:

- (a) the group ABΓΕ (I, III-IV, and V);
- (b) the group ΖΗΘΜΝΙ, the first three books of which are commonly regarded as the backbone of the *Metaphysics*. This group deals with the main subject of any metaphysical investigation, ousia — perceptible ousia in Books ΖΗΘ, imperceptible ousia in ΜΝ— while I, which is clearly connected with Β, is concerned with the nature of unity and of kindred conceptions;

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<sup>1</sup> Ackrill (1981), 3f. Alexander of Aphrodisias's suggestion (CAG I, p. 515<sup>20</sup>; cf. Asclepius CAG VI-2, p. 4<sup>415</sup>) that Eudemus may have done some editorial work on the metaphysical and ethical treatises is commonly held as the most probable. The story connecting Book Α or α with Aristotle's pupil and Eudemus' nephew, Pasicles of Rhodos, (in *Scholια* 589a41 ed. Brandis) fits in well with Alexander's suggestion, as far as *Met.* is concerned. See Ross I *Introd.*, XXXII, n. 1. However, Barnes (<sup>2</sup>1999, 62ff.) may be right in questioning the story of a Eudemian edition. D. Harlfinger describes the history of textual criticism concerning *Met.* in Aubenque (1979), 7-36. Kahn (1985, 311) remarks that "even if we exclude three of the 14 books (namely α as having no organic links with the rest, K as probably inauthentic, Δ as *hors série*) the remaining eleven are far from providing a continuous exposition". He is of the opinion (338), however, that "attention to the kind of rhetorical clues and terminological variation [...] may help us see that there is more compositional art and more literary continuity in the treatises of the *Metaphysics* than is usually recognized". We owe to Kahn (*ibid.*) a pertinent discussion of all the evidence found in the *Metaphysics* which may elucidate what kind of content and doctrinal unity First Philosophy was intended by the author himself to have.

<sup>2</sup> From about 1200 the Medieval masters had access to several versions of the *Aristoteles latinus*. Their selection of ten books for teaching metaphysics at the universities (I-II, IV-X, XII) does not exactly correspond with the ten-book *Metaphysics* (ABΓΕΖΗΘΜΝΙ) that is mentioned in the list of Aristotle's works in the *Anonymus Menagii*; Ross I, XXIII.



(c) the outlying books, which are apparent editorial insertions of (for the greater part) authentic treatises,  $\alpha$ ,  $\Delta$ ,  $K$ , and  $\Lambda$ .<sup>3</sup>

The introductory books ( $A$ ,  $\alpha$ ,  $B$  and  $\Gamma$ ), then, discuss matters of ‘scientific’ method in general, and the requirements of metaphysical enquiry in particular. The topics vary from general remarks about how to tackle problems to thoroughgoing observations about the most fundamental laws of thinking. Most important for our purposes are the additional pieces of information about his own semantics which Aristotle implicitly provides us with. The aim of the present chapter is to highlight whatever one needs to know in order to understand the ins and outs of Aristotle’s search for True Being.

### 7. 1 *How to tackle ‘scientific’ problems*

In his fine chapter on “The mind of Aristotle”, Guthrie (1981, 89) argues that the internal tendencies of a philosopher’s own ideas are themselves a product of existing philosophy and the impact on it of his own personality and cast of mind. In Aristotle’s case, this impact comes about as the man’s basic outlook, which colours all his writings, and chiefly determines the direction in which he modifies the achievements of his predecessors. Thus, Guthrie claims, observation and previous philosophy afford the material of Aristotle’s thoughts.

The opening book of the *Metaphysics* shows that Aristotle might have put things this way himself, as far as previous thinking is concerned. In observing, criticizing, and countering his predecessors’ philosophic tenets, Aristotle develops his own approach to the problems, his own strategy of argument, that is, including his favourite devices and tools, to master any puzzles and riddles the true metaphysician inevitably stumbles upon, particularly that “everlasting question”, ‘What precisely is that which *is*?’ (*Met. Z* 1, 1028b2-4).

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<sup>3</sup> For a thorough discussion of the structure of the *Metaphysics* (including a critical account of Jaeger’s (1923) thesis about Aristotle’s development) see Ross I *Introd.*, XIII-XXXI, and his *Introduction* to J. Warrington, *Aristotle’s Metaphysics* (tr. London-New York, 1956), XXI-XXVII. For detailed information about the composition of the *Metaphysics* and the arrangement of the several treatises making up the text as handed down to us see Ross *ibid.*, XV-XXXIII; Frede & Patzig, I and II; Burnyeat (1979), 93ff.; (1984), 45; Bostock (1994), 66ff.; 119f.; 176.

7. 11 *The predecessors observed and criticized*

As in several of his other works, a main feature of Aristotle's strategy of argument in *Met.* is to begin his discussion of the proper subject with a survey of his predecessors' views of the matter, in which he aims at assessing his own investigations as complementary to, and above all corrective of, what previous thinkers had put forward on the doctrine of being and becoming.<sup>4</sup> As a matter of fact, in the opening lines of Book α, Aristotle (1, 993b2ff.) recommends us to pay serious attention to even the most superficial opinions, since "a combination of all conjectures results in something considerable". It is essential, he says (B 1, 995a24ff.) before starting his survey of the perplexities (ἀπορίαι), to have a clear view of the difficulties of the subject and impartially consider the *pros* and *cons* (brought forward by previous thinkers) with regard to each of the main questions.

Mansfeld (1994, 148-61) has convincingly pointed out that Aristotle's attitude to the doctrines and sayings of his predecessors, and of poets as well, is surely not an isolated phenomenon in the development of Ancient thought. Whether this stance was based on the conviction that earlier authors used to covert language for a reason, or were just being vague, the Ancient interpreters were basically of the opinion that a more profound sense could be gathered from the earlier writings and sayings. While he was not so sure about how to deal with poets,<sup>5</sup> Aristotle believed that, where in matters of metaphysics the early philosophers had expressed themselves in an unclear way, one could discover what they intended to say (διάνοια) by carefully scrutinizing their texts.<sup>6</sup>

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<sup>4</sup> Embarking upon the delicate problem whether Platonists are right in assuming non-sensible substances that are immovable and eternal, Aristotle acknowledges that one "must first consider what is said by others, so that [...] if there is any doctrine (δόγμα) common to them and us, we shall have no private grievance against ourselves on that account; for one must be content to state some points better than one's predecessors, and others no worse". (*Met.* M 1, 1076a12-16); also Λ 8, 1074b1ff; Guthrie VI, 91. Of course, not all opinions are worthwhile, for example those of children, the sick, and the mad (*EE* I 3, 1214b27ff.; Lloyd (1996), 19.

<sup>5</sup> *Met.* A 3, 984a3; Mansfeld (1994) 155.

<sup>6</sup> E.g. *Met.* A 10, 993a11-16, where Aristotle deals with the four causes as inarticulately present in the infancy of philosophy. Some more evidence is given in Mansfeld (1990), 41 and 51. Patzig (1979, 39f.) has poignantly expressed the situation thus: "To be interestingly in the wrong is, philosophically speaking, more important and more fruitful for others than to be trivially and narrow-mindedly right. It goes without saying that to be interestingly in the right is still much better".

In line with the afterthought which seems to underly this manner of tackling problems throughout, viz. that truth is to be disclosed by an aporetic method of trial and testing,<sup>7</sup> is Aristotle's preference for the aporematic method: more than once, after discussing an intricate question without any really satisfactory result, the author proceeds to discuss the initial problem from another point of view, with the *intro* "Let us try a fresh start". Ross (I, *Introd.*, LXXVII) aptly characterizes the strategy and general method of *Met.* by saying that this work "as a whole expresses not a dogmatic system but the adventures of a mind in its search for truth".

The argumentative procedure Aristotle applies in order to advance his own views most of the time does not lead him to deduce them from some tenable premisses commonly held. Instead he sets out to discredit the opposite views, which he skilfully undermines in a *reductio ad absurdum* of their inevitable consequences — which are usually presented in the form of their very contradictions, thus making a claim for the plausibility of his own alternatives.

In order to fully comprehend Aristotle's metaphysical views, one has to recall his recommendation<sup>8</sup> to try first to grasp what precisely is the proper way of tackling the problems under discussion, because "it is unfeasible (ἄτοπον) to seek at the same time for knowledge and for the manner in which it has been arrived at". Indeed, the listener or reader must "have already been trained how to take each kind of argument" before he can begin to comprehend the doctrine at hand. In what is referred to as "our prefatory remarks" (B 1, 995b5) and "our first discussions" (B 2, 997b4), Aristotle presents us with explicit hints to observe quite closely his idea of approaching intricate matters successfully. These hints will bring us into the nucleus of Aristotle's semantic approach.

### 7. 12 *Wisdom and the knowledge of causes and principles*

Of the first three of the introductory books, the cluster A, α, and B, the first opens with an assessment of the whole undertaking of

<sup>7</sup> One should notice Aristotle's use of the οὐ μὴ formula (Frede & Patzig II, 142). The aporetic method in *Met.* and the cosmological works is highlighted in Cleary (1995), esp. 199ff. On the special function of ἀπορίαι in Aristotle see also Goldin (1996), 79f.; likewise the particle ἤ often introduces in Aristotle a tentative or alternative solution to the difficulty at hand; Ross (1961), 204 (to *An.* III 4, 429a29).

<sup>8</sup> In his fine psychological observations on how to obtain the maximum effect with a lecture, which conclude Book α (3, 994b32-995a14).

seeking the truth about the things-there-are (τὰ ὄντα), which should be seen in the context of removing the surprise and perplexity about the initial ‘chaos’ any uneducated observer of the outside world is bound to experience. The opening section traces the development of how the mind proceeds from sense-perception to genuine knowledge (ἐπιστήμη) through memory, experience, and art. The focal problem of philosophizing in general is clearly put before the listener’s (reader’s) mind at A 1:

*Met.* A 1, 981b10-13: We do not regard any of the sense perceptions as wisdom (‘true knowledge’); yet surely the senses are the most authoritative means of getting acquainted with particulars. However, they do not tell us the ‘why’ of anything, e.g. *why* fire is hot; they only say *that* it is hot.<sup>9</sup>

To attain true knowledge (ἐπιστήμη, called σοφία in the opening part of *Met.*) about things of the outside world, what is strictly required is to know their ‘why’, i.e. their primary causes and principles.<sup>10</sup>

Next, seven commonly accepted characteristics of the wise man (or philosopher)<sup>11</sup> and his knowledge are listed (2, 982a8-19):

- (a) the philosopher knows everything, without knowing each of the particulars individually;
  - (b) he is capable of learning things that are difficult for humans to comprehend;
  - (c-d) he excels in exactness and the capacity to teach the causes of things;
  - (e) the knowledge he is striving after is pursued for its own sake, rather than for its practical results;
  - (f-g) his discipline governs the other (subordinate) disciplines, and he is the one who gives orders and should be obeyed by the rest.
- All these characteristics, then, tend to make us apply the name ‘wisdom’ to the knowledge of the primary causes and principles of things (982b7-10).

Now that the proper object of the investigation has been clearly stated, it is necessary to see in what senses the words ‘cause’ and ‘principle’ are used, among others by the predecessors. After

<sup>9</sup> For this important opposition see *APo.* *passim*, and *EN* VI 3, 1139b14-1141b8. See also Ross’s comments on *Met.* A 2, 982b2.

<sup>10</sup> *Met.* A 1, 981a28-29; 2, 982a4-6. The juxtaposition of ‘primary or original causes’ (πρώτη αἰτία, ἐξ ἀρχῆς αἰτία) and ‘principles’ or ‘starting-points’ (ἀρχαί) is so frequently found in Aristotle that they should be taken as referentially identical.

<sup>11</sup> For this identification, which was well observed by the Medieval commentators, see A 2, 982b11-21.

repeating his view of the philosopher's task, Aristotle presents four senses in which causes are spoken of:

*Met.* A 3, 983a24-b4: Since we have to acquire knowledge of the original causes — for we say to know each thing only when we think to become acquainted with its first cause — <one should know that> causes are spoken of in four senses. In one of these we mean the ousia, i.e. quiddity (τὴν οὐσίαν καὶ τὸ τί ἦν εἶναι), for the 'why' is ultimately reducible to the definiens, and the first<sup>12</sup> 'why' is cause and principle; in another the matter or substratum; in a third the source of the change, and in a fourth the cause that is its counterpart, namely the purpose or the good, for this is the end of all generation and change. We have studied these causes sufficiently in our work on nature [*Phys.* II 3, 7], but let us call to our aid those who have attacked the investigation of the things-that-are and philosophized about reality before us. For clearly they, too, speak of certain principles and causes; and so to go over their views will be advantageous to the present inquiry.<sup>13</sup>

In the epilogue to Book A (10, 993a11-16), the author agrees that all his predecessors were seeking the four causes listed above, and that the extensive discussion of their various views did not yield any additional kind of cause. By seeking and describing the four causes that vaguely, however, — which is natural in the infancy of philosophy, Aristotle generously admits —, the best thing to do is to first review the difficulties that might be raised on account of the four causes before undertaking one's proper investigations. Book B, then, will outline such a set of 'perplexities' (ἀπορίαι). The editor's (?Eudemus) arrangement of the Aristotelian metaphysical treatises, however, has presented us first with the short treatise numbered α, interspersed between A and B, which aims to give a general introduction useful to all those listeners or readers of lectures on theoretical knowledge.<sup>14</sup> Though it appears to be an introduction to lectures on physics rather than a course on metaphysics (as is clear from its concluding words), this short treatise contains several useful clues to uncover Aristotle's way of tackling and teaching the subject matter of the *Metaphysics* as well.

<sup>12</sup> *Met.* α 1, 993b27.

<sup>13</sup> The same four causes are mentioned in the *Physics* (II 3, 194b16-195b30 and 7, 198a14-b9).

<sup>14</sup> For its assessment in the whole of the *Metaphysics* see Ross I, 213, and *Introd.*, XXIVf. Neither the ancient nor the modern commentators have any doubt about the authenticity of the treatise, because both the thought and the language are thoroughly Aristotelian. Jaeger may be right in taking it as Pasicles's somewhat fragmentary notes of a discourse by Aristotle.



7. 13 *The general introduction presented in Met. α*

Book α opens with general observations about the study of the nature of things. The object of philosophy, which is rightly called the knowledge of truth, the author says (1, 993b19-24) — for the end of any theoretical search is truth — is to seek a thing's causes, since there is no knowledge of anything which truly *is* without knowing its cause. In the very beginning of the treatise (993a30-b4) the study of truth is said to be both a difficult and an easy undertaking, meaning that nobody is able to attain the truth adequately, while, on the other hand, we cannot *all* be wide of the mark. So the modest results reached by each thinker may all add up to something considerable. The difficulty of the study of reality is due to the fact that, although we may have general access to an object taken as a whole, we are unable to grasp the precise part of it we are aiming at (993b6-7). Perhaps our failing should not so much be attributed to the objects of our study, the author adds (993b7-11), as to ourselves, because just as bats' eyes are blinded by the daylight, likewise our intellect is dazzled by that which is by nature most obvious.

Having learnt from the vicissitudes and fortunes of previous thinkers,<sup>15</sup> we should now focus more purposefully on that which is the immanent cause and principle within the things studied in our search for truth. To really have an eye for causes and principles in things boils down to being aware that some causes should be given special attention, seeing that they possess a causative quality in a higher degree than other things of the kind, such as e.g. fire, which proves to be the hottest of hot things, and must be regarded as the cause of the heat of other things. By proceeding along this line of thought, the philosopher comes to generally understand that there are some causes and principles *par excellence*. The author eventually speaks (993b27) of “the most true cause which causes all subsequent things to be true”.

At the outset one should notice the clear association between ἀληθής-ἀλήθεια and φύσις. The term ἀλήθεια is used in this context in the same sense as elsewhere (e.g. at A 3, 983b2 and 7, 988a20), meaning that which really *is* in the outside world. By τὸ ἀληθές, then, *that* specific character should be understood which pre-eminently causes a thing to *be*.<sup>16</sup>

<sup>15</sup> Cf. *Sens.* 7, 448a20ff.

<sup>16</sup> My sections 8.4 and 11.22-11.23.

This interpretation is strongly supported by the opening lines of the chapter, where ἀλήθεια and φύσις (in the sense of ‘the nature of things’) are plainly correlated, so that the particular feature indicated by τὸ ἀληθές is to be taken as a particular thing’s true nature. When claiming (at α 1, 993b23-24) that we do not know a thing’s nature without knowing its cause, Aristotle must mean to say, not that there is a cause or principle outside the particular, which causes it to *be*, but that a thing’s particular immanent nature should be grasped (cf. θιγεῖν at 993b1, and Θ 10, 1051b24; Λ 7, 1072b21) as its cause. The only way to grasp a thing’s nature is in terms of causality. By remarking that, quite naturally, the nature of eternal beings is ‘most true’ and does not itself depend on a prior cause, Aristotle only means to point out how different they are from the transitory natures of changeable things, which only continue to exist in so far as they inform newly generated things. However, whether eternal or not, all things owe their being to a principle or cause:

*Met.* α 1, 993b24-31: We are not familiar with what-is-true without knowing the cause. Of each thing it holds<sup>17</sup> that this [i.e. the cause] is itself in the highest degree that after which a feature of the same name belongs to other things. For instance, fire is the hottest <of all hot things>, for it is the cause of heat for everything else. Hence *that* is most true which causes things arising from it to be true. Therefore in each case [first αεί at b28] the principles of the things that always are must be the most true, for they are not merely *sometimes* true, nor is there any cause of *their* being, but they themselves are the cause of the being of other things. And that is why as each thing is in respect of being, so it is in respect of truth.

The question now comes up what kind of principle and cause exactly Aristotle is talking about. Ross seems to understand our passage in terms of propositional truth.<sup>18</sup> In my view, however, the cause looked for is something different. Aristotle said in the opening lines of the present treatise (993b4ff.) that truth is like the proverbial door<sup>19</sup> which one can hardly miss, but, on the other hand, it is difficult to know it thoroughly owing to the fact that although we have some grasp of the whole (the concrete thing as a whole, that is), we cannot

<sup>17</sup> Note the emphatic position of ἕκαστον.

<sup>18</sup> “ [...] so that that which causes derivative truths to be true is most true” (Oxford Translation, 993b26-27).

<sup>19</sup> Schwegler (*Die Metaphysik des Aristoteles* I. Tübingen 1847) assumed (*ad loc.*) that doors or gates were used to fix a target even bad archers cannot miss. I owe this information to my late friend, Professor Cornelis Verhoeven.

grasp 'the part'.<sup>20</sup> What he is saying in our passage is that, dazzled as it is by the obviousness of the things outside, as presented by the senses as something whole (ὅλον τι, 993b6), our mind fails to recognize *that* particular element in those things the philosopher is after when he seeks the concrete things' cause and explanation.

Clearly enough, therefore, these true principles are not something propositional, such as the well-known logical maxim 'the whole is always greater than any part of it'. Rather, in this context the truth is ontological truth, i.e. intelligibility, which in Ancient and Medieval thought counts as a thing's susceptibility of being perceived by the mind. It is *the* metaphysical condition of each and every entity, and as such convertible with 'be-ing'. With Aristotle's predecessors, Parmenides and Plato in particular, intelligibility is precisely that which preserves a thing from the abyss of non-being.<sup>21</sup> So the most true cause is that which most truly causes things to truly *be*.

That this must be the cause meant here also appears from the broader context. Aristotle's examples of what he means by 'truth' and 'cause' contain some unmistakable semantic clues that it is the causality of particular forms ('instantiations') immanent in things (as their 'instances') he has in mind. Right after the claim that 'true' and 'cause' are closely connected, he explains his identification of the two by showing that what causes other things to be so-and-so must itself have this feature in the highest degree of all the things bearing a feature of the same name, and, qua synonymous, can be called up by the same appellation (name).<sup>22</sup> This is, for instance, the case with heat (fire) and the hot ('fiery') nature inherent in hot things. It is the cause of the heat of the other things that can be named by the same appellation 'hot'; both the immanent heat and the thing it inheres in can be indicated by the phrase 'the hot'. Again, it is the immanent cause which is under consideration, since to Aristotle, the

<sup>20</sup> In the final analysis, this 'part' is identified as the object's immanent εἶδος. See end of my next section, and in general the outcome of *Met. Z*.

<sup>21</sup> See De Rijk (1986), 84-90; 164-73. In *Met. Θ* 10, ontic truth is opposed to propositional truth; my section 11.2. For connotative be-ing and one see my sections 1.64 and 9.34-9.35.

<sup>22</sup> The expression τὸ συνώνυμον at 993b25, which is plainly of Platonic lineage, is commonly (Ross, Tredennick, Tricot, Reale) rendered too loosely "the similar quality", and should rather be interpreted semantically as 'the feature whose name they all have in common'. See Aristotle, *Met. M* 4, 1079a4 and a31-b3, where Annas (1979, 155) seems to think that to Aristotle, merely the names are shared. For a similar semantic relationship between Forms and things in Plato see *Phaedo* 78E, 102B1-2 and 107B8-9; *Rep.* 596A; *Parm.* 130E and 133D; *Tim.* 52A.

word τὸ πῦρ cannot possibly stand for some Platonic entity, Fire, nor should it be taken to refer to some extrinsic fire actually heating the hot things, because why should this particular fire be more hot than the hot things? One does not have to be a pyromaniac to know better.

In the next sentence the author phrases his claim in general terms: that which causes things arising from it to be true (or ‘truly *be*’) must possess this feature in the highest degree. As will be shown in the next section, we must not be misled by Aristotle’s use of τοῖς ὑστέροις at 993b27 to think of a chronologically prior extrinsic cause.

#### 7.14 *Three methodological hints*

The text as handed down to us contains three precious clues for understanding Aristotle’s method of tracking down “the particular part we are aiming at”, instead of going no further than vaguely examining things. This method consists in using linguistic devices. As we were told at 993b24-25, each thing to which other things owe some common ‘ontic quality’, is such itself in a higher degree than the other things of the same name. I have already drawn attention to the semantic hint that the ‘common thing’ one should focus upon in particular is designated as τὸ συνώνυμον, i.e. ‘that which has the same name’. According to Aristotle, to have the same name implies possessing the same nature and definiens.<sup>23</sup> In the present context this means that when we are looking for e.g. the cause of the sun, or water, or logs, or fire being-hot, we should focus on the entity ‘heat’ as the common ontic quality owing to which all these things are hot (and fire the hottest of all) and, accordingly, are synonymous (i.e. qualify for the common name ‘hot-thing’, which is a one-word expression in Greek). Thus when investigating the ‘why’ of various hot things, we should pinpoint the common quality ‘heat’ owing to which they are all (named) ‘hot’: by approaching the matter in this way we are able to find their cause and the desired explanation. This ‘cause and principle’ in point of fact is a thing’s immanent cause, which before long will be identified as its formal cause.

Another clue is found in Aristotle’s use of the expression ‘subsequent things’ (τοῖς ὑστέροις at 993b27) to designate the things

<sup>23</sup> *Cal.* 1, 1a6; 5, 3a34; *Top.* IV 3, 123a28; VI 10, 148a24; *ENV* 4, 1130a33; *Met.* A 6, 987b10. The last passage shows Aristotle’s indebtedness to Plato in this respect. See also De Rijk (1986), 317.

caused by the principle or cause. Surely, this ‘subsequent’ should not be taken in its temporal sense. Rather it is meant to point to the relation of causal posteriority; in a similar way a cause can be called the *πρότερον* of its result, without any connotation of pre-existence either.<sup>24</sup> But there is more to say about the causal priority under examination. The next chapter of his small treatise, which thoroughly deals with Aristotle’s efforts to rule out any infinite chain of causes (both in the upward and the downward direction) — which would completely frustrate our analysis of things in order to trace ‘the particular part we are aiming at’ — shows that causal priority and posteriority are substantial in the procedure of analysing things. We will find some more hints of the kind elsewhere.

A third suggestion of how to interpret Aristotle’s method of searching ‘some particular part’ of something is found at *Met.* α 1, 993b6. When he complains that the phenomenon that we are unable to grasp “the particular part we are aiming at”, but only have some grasp of the thing as a whole (*ὅλον τι*), Aristotle’s dissatisfaction concerns our inability to *combine* the two approaches, that is to say ‘to have something as a whole *and* a part’. Thus what Aristotle is recommending is to consider not only the whole but also the part *as immanent in* that whole. In doing so, he, as so often, testifies to what Guthrie (1981, 103) has called Aristotle’s inviolable common-sense postulate of the primacy of the particular, to the effect that all things and everything, including the ontic causes (forms) which the particular things share with other instances of the same name, are strictly individual.<sup>25</sup>

### 7. 15 *An infinite chain of causes rejected*

In the second chapter, the author stresses how important it is to see that the causes and principles — regardless of whether they are material, efficient, final or formal — do not form an infinite chain, neither in the upward nor in the downward direction, and are not of an infinite number of kinds either. The greater part of this chapter concerns physical investigation, as is patently clear from the examples given by Aristotle. However, his discussion (2, 994b16-31) of the formal cause is of a somewhat wider scope, it seems, and again alludes to

<sup>24</sup> *APo.* II 16, 98b17.

<sup>25</sup> Most translations wrongly suggest Aristotle is saying that it is better to have the particular part than the whole.



the logical analysis the author has in mind when it comes to acquiring epistemonik knowledge.

One has to notice, first, that the formal cause is designated by the expression τὸ τί ἦν εἶναι or the what-it-is-to be. Seeking a thing's formal cause, then, is seeking its fundamental 'what-it-is' or 'essence', which is appropriately presented in its definiens (λόγος). This 'what-the-thing-is' as explained in the initial (ἔμπροσθεν) definiens of, say, 'man', viz. 'rational animal', is always closer, Aristotle claims, to what an appropriate description of the essence ought to be than a posterior definiens — which only makes the previous one more explicit — would be, e.g. 'rational sensitive living substance', which merely presents a definition of (part of) the initial definiens.<sup>26</sup> Therefore in cases in which the initial definiens will not do, neither will the subsequent one; and so it is useless to frame an infinite series of definientia made out of the initial one. In addition, those who speak in such terms destroy epistemonik knowledge (ἐπίστασθαι), and every-day knowledge<sup>27</sup> as well, since to acquire the former you must end up with terms that can no longer be analysed into genus and differentia,<sup>28</sup> while everyday knowledge would be ruled out if infinite things were to be conceived of.

### 7. 16 *How to frame a persuasive argument*

Aristotle's small treatise winds up with a short chapter containing some pertinent psychological observations about the methodological requirements for an effective lecture (ἀκρόασις), such as the different parts of the *Physics* and *Metaphysics* are meant to be.<sup>29</sup> In fact, the tenor of this chapter is to argue for the adequacy of the Aristotelian method of epistemonik research in the field of physics and metaphysics.<sup>30</sup>

<sup>26</sup> This interpretation, which is found in Alexander of Aphrodisias, is rightly recommended by Ross, *ad loc.* It is also in keeping with Aristotle's later expositions of a thing's εἶδος ('infima species') and primary οὐσία; see my sections 9.6-9.7.

<sup>27</sup> Γινώσκειν = 'to become familiar with something'.

<sup>28</sup> For this use of ἄτομος see Ross *ad loc.*

<sup>29</sup> The full title of the *Physics* is Φυσικὴ ἀκρόασις ('Lecture-course on nature'). The 'acroatic' character of the *Metaphysics* seems to be alluded to in B 2, 996b8: "from our discussions some time ago". Incidentally, the significance of the *viva vox* for teaching and learning is implied in what Aristotle says (*Sens.* 1, 437a3-13) about hearing (ἀκοή) as the superior sense, taking precedence over sight (ὄψις), because it develops intellectual activity and intelligence (cf. a4-5: κρείττων πρὸς δὲ νοῦν ἢ ἀκοή; a11-12: πρὸς φρόνησιν ἢ ἀκοή πλείστον συμβάλλεται μέρος).

<sup>30</sup> A comparison of these requirements with those discussed in Galen, *On*

The author first remarks ( $\alpha$  3, 994b32-995a6) that the effect lectures have upon an audience are related to the habits of the listener, for they are only effective if the listener is addressed in a language he is accustomed to. That which is beyond the customary appears not to be equally familiar, but somewhat unintelligible and strange because of its unwontedness; for it is the customary that is intelligible.<sup>31</sup> As he often does, Aristotle clarifies his intentions by making a comparison. The force of the customary comes to the fore in the case of laws, he says, in which legendary and childish elements tend to prevail<sup>32</sup> over our perception of the laws themselves, because of the familiarity of these extraneous elements. Ross refers to *Met.*  $\Lambda$  8, 1074b1ff., where Aristotle speaks of the tradition our forefathers handed down to posterity in a mythical form with a view to persuade the multitude "and to its legal and utilitarian expediency". On this interpretation, what Aristotle means to say is that, owing to their being familiar, the mythological and childish context in which lawgivers sometimes promulgate their laws *can* prevent people from being aware of the serious matters the laws are about.

Next, the various attitudes and demands of listeners are mentioned (995a6-17). Some people demand mathematical proof, others examples, others the witness of a poet. Some require accuracy in every argument, while others are annoyed by it, either because they are unable to follow the reasoning or because they regard it as pettifoggery.<sup>33</sup> This much is certain, one needs to have been trained in various methods required for different domains of learning before embarking on the actual study:<sup>34</sup> for it is unfeasible, Aristotle warns, to simultaneously seek for knowledge and learn the method to acquire it, leaving aside that even only one of the two is difficult enough to acquire.<sup>35</sup>

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*Exegesis*, is pertinent, as is clear from their assessment in Mansfeld (1994), 148-69.

<sup>31</sup> What is familiar contains, so to speak, the potential higher knowledge which teachers are supposed to actualize in their pupils; *Met.*  $\Theta$  8, 1050a17-19.

<sup>32</sup> Taking  $\iota\sigma\chi\acute{\upsilon}\epsilon\iota$  (995a5) as *praesens de conatu*.

<sup>33</sup> That different disciplines demand different degrees of accuracy is more than once emphasized or implied by Aristotle. E.g. *APo.* I 24, 86a16ff.; 27, 87a31ff.; *Met.* E 1; M 3, 1078a9-14; *Cael.* III 7, 306a27; *PA* I 1; *GA* IV 10, 778a4-9; *EN* I 3, 1094b11-27; III 5, 1112b1-9; VI 7, 1141a16-18.

<sup>34</sup> Aulus Gellius, *Noctes Atticae* XX,5: "In the Lyceum he (Aristotle) devoted the morning to the acroatic subjects, and he did not allow anyone to attend them without assuring himself of their ability, educational grounding, keenness to learn and willingness to work"; Guthrie (1981), 41.

<sup>35</sup> The concluding part of the treatise (3, 995a15-19) again clearly concerns the study of physical matters.

In another passage of the central part of the *Metaphysics* (Z 3), Aristotle draws our attention to what he considers the golden rule for all kinds of learning and investigation. We should start from what is familiar to us by sense perception, i.e. more knowable relative to us, in order to attain that which is more knowable in itself, without any relational qualification. It should not come as a surprise that this passage is found in Aristotle's discussion about how to grasp true Being, seeing that a thing's beingness (οὐσίᾱ) is an outstanding example of what escapes sense-perception:

*Met. Z 3, 1029a33-b12*: It is generally admitted that some ousiai are possessed by sensible things, so that we must look first among these. For it is of advantage to proceed by stages towards that which is more intelligible. All learning proceeds in this way, through that which is less knowable by nature towards what is more knowable. And just as in matters of conduct someone's task is to start from what is good for each and make what is entirely good also good for oneself, so here the task is to start from what is more knowable to oneself and make what is more knowable by nature knowable to oneself. It is true, what is knowable and first to each individual is often knowable to a very small extent, and has in it little or nothing of what *is*. None the less we must start from that which is scarcely knowable but knowable to oneself, and try to know what is entirely knowable, advancing, in the aforementioned way,<sup>36</sup> by way of those very things one does know.

In the course of the subsequent metaphysical investigations, as in many others in Aristotle, it will appear that the first attempts to grasp the nature of the outside things usually consist in linguistic approaches, by analysing the distinct appellations by means of which we are accustomed to call up things for scientific consideration as well as for practical purposes.

## 7.2 *The scope and proper method of metaphysics (Met. B)*

In the last Book of the introductory cluster B, Aristotle outlines (ch. 1) and explains (chs. 2-6) a set of problems (ἀπορίαι) that should be primarily raised with a view to the knowledge he is looking for. They are fifteen in number, most of which will actually come up

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<sup>36</sup> Quite often in Greek the phrase ὥστερ εἰρήται pregnantly means to refer to the manner in which something is explained, rather than just conveying a textual reference ('as has been said'). E.g. *Top.* III 4, 119a1-2; III 6, 120a35. Cf. *Phys.* I 7, 190a14: ὥστερ λέγομεν = 'in the way we suggest'. See our *Index s.v. λέγειν*.

for discussion, more or less directly, in the remaining part of the *Metaphysics*.<sup>37</sup>

### 7. 21 *The proper scope of metaphysical investigation*

Four problems (1-3, and 5) regard the scope of metaphysical investigation and will be discussed in the next Book (Γ), chs. 1-3. The first one, whether it is the task of one discipline to study all the kinds of cause, leads to an interesting remark on method. After having recognized (B 2, 996b8-13) that every cause but the material has some claim to being the object of Wisdom (First Philosophy)<sup>38</sup>, Aristotle continues: "But inasmuch as it [the study of Wisdom] was described (A 2, 982a30-b2) as dealing with the *first* causes and that which in the highest sense is the object of knowledge, the knowledge of the ousia must be such knowledge".<sup>39</sup> Then he goes on to characterize the specific method of the metaphysical investigation he has in mind, by opposing it to some other ways of understanding 'things'. From Aristotle's words it is plain that he is anticipating what will be the main outcome of Book Z, viz. the equation of 'first cause and principle' with εἶδος ('infima species'), which is *the* object of proper knowledge. Notice that in this connection a thing's οὐσία is clearly opposed to its affections signified by the non-substantial categories:

*Met.* B 2, 996b14-22: For while there are many ways of understanding the same object (τὸ αὐτὸ), we say that the man who tries to find out what the thing is (τί τὸ πρᾶγμα) by its being so-and-so comes to know it better than by its not being so-and-so. And in the former case one way<sup>40</sup> is more informative than another, and most of all the one that

<sup>37</sup> See Ross I, 221-4. Note that I am following in the present sections the order of the 15 apories as they are listed in B 1, 995b4-996a17. An alternative order is followed in Madigan's translation (1999, 3-18) of B, chs. 2-6. See also Madigan, *Introd.*, XXXIII-XXXVIII. — A thoughtful discussion of *Met.* B (and the parallel text in K 1-2) is found in Madigan (1999), *Introd.* XIII-XL and his detailed comments on the text (1-159). Cleary (1995, 199-225) extensively assesses the aporetic method of *Met.* B.

<sup>38</sup> *Met.* α 1, 993b20-21: "It is right also that philosophy should be called 'knowledge of truth'; for the end of theoretical knowledge is truth."

<sup>39</sup> As often in Greek, the word τοιοῦτος ('of that nature') is used to refer to some property or feature mentioned before, merely to prevent repeating an adjective or appellative noun, and without any connotation of resemblance. So Tredennick's translation "will resemble Wisdom" is somewhat confusing.

<sup>40</sup> I think we had better substitute the different 'persons understanding' by the different 'ways of understanding', the more so because participial construals such as τὸν γινώσκοντα more often refer to the act involved than to the acting subject. Cf. τῷ ὁπύρτοντι at Δ 30, 1025a16, and my note thereto.

focusses on its 'what-it-is', not those that spotlight its size or quality or natural capacity for acting or being acted upon.<sup>41</sup> And further in all other cases as well, and especially speaking about things concerning which epistemonik proofs (ἀποδείξεις) are in order, we think that the getting familiar (τὸ εἰδέναι) with each particular 'thing' only occurs when we see<sup>42</sup> what something is, for instance, that to square a rectangle is the finding of a mean proportional to its sides; and likewise in other cases.

It is plain from the last sentence that the special objects of ἀπόδειξις ('epistemonik proof'), i.e. states and states of affairs (propositional contents or dictums) are included as well. Aristotle is clearly singling out *that* special metaphysical way of understanding things which aims at discovering the quiddity of something — regardless of whether they are subsistent things of the outside world (covered by the category of 'substance'), or merely immanent 'things' (various states, including operations, such as squaring a rectangle, falling under the category of 'action'), or states of affairs (like 'to-square-being-to-find *etc.*'). This method equally concerns the precise nature of 'man', 'tree', 'stone' and 'whiteness', 'size' or 'drawing conclusions'.<sup>43</sup>

The second aporia as such clearly bears upon method, asking (995b6-10) whether the investigation under consideration should survey only the first principles of being-ness (τῆς οὐσίας), or should also include the demonstrative principles on which all people ground their proofs, e.g. whether or not it is possible at the same time to assert *and* deny one and the same thing, and other principles of the kind. Various answers to this problem are presented in the next chapter, 2, 996b26-997a15, and Aristotle's solution will be found in Γ, 3.

The third problem is about the proper scope of metaphysics, asking whether one science, or more than one, deal with all substances, and *if* they are more than one whether they all are kinds of Wisdom (995b10-13; 997a15-25). Although apparently a question about the extension of the province of metaphysics, this question, which was to be a highly controversial item with Aristotle's Greek,

<sup>41</sup> Cf. *Cat.* 5, 2b34-37.

<sup>42</sup> The Greek text has εἰδῶμεν (from εἰδέναι = 'to know'), which is of the same root 'id-' found in ἰδεῖν, which serves as the aorist to ὁρᾶν = 'to see'.

<sup>43</sup> Ross *ad loc.* aptly refers to *APo.* II 10, 94a11ff. in which the first non-demonstrative way concerning the quiddity of substances (λόγος τοῦ τί ἐστὶν ἀναπόδεικτος) is discussed as opposed to the demonstrative way concerning that of attributes and operations (called συλλογισμὸς τοῦ τί ἐστὶ πῶσει διαφέρων τῆς ἀποδείξεως). Compare the use of οὐσία and τί ἐστὶ for the quiddities of non-substantial beings, too; my section 4.23.

Arab, and Latin Commentators, properly concerns the formal nature of the object of metaphysics.

The fourth aporia bears on one of the most tricky problems of metaphysics: should we hold that only sensible ousiai exist, or that there are others besides? And should we hold that there is only one class of non-sensibles, or more than one? — as do those who posit the Forms and the mathematical objects as intermediate between the Forms and sensible things (995b13-18; 997b34-998a19).

The fifth problem concerns the essential attributes of ousiai, asking whether they are discussed by the same science as the ousiai themselves (995b18-27; 997a25-34). This problem too touches on the proper scope and method of metaphysics. It will be solved in  $\Gamma$  2, by showing that, owing to the semantic procedure applied in any metaphysical investigation, its proper object comes into the picture, which, referentially speaking, is each and every being, but, formally, those beings *qua* being only, so that ontic attributes *qua talia* will not be ruled out.

## 7. 22 *How to zoom in on causes and principles*

The remaining apories are basically all about how to assess the ontic principles and causes properly, and thus all concern epistemonik analysis. The sixth and seventh apories are about how to identify the principles, asking whether we should assume that the ontic classes or their primary constitutive parts are the principles of things (995b27-29; 998b20-b14); if the former are the principles of things, whether it is the highest genera, or rather the infimae species that should be looked for (995b29-31; 998b14-999a23). These problems will be solved in  $Z$ , 10 and 12-13, where it will be stated that the primary object of metaphysical investigation is a thing's εἶδος ('infima species'), but this *qua* enmattered. The semantic impact of the problems comes to the fore at 998b5ff., where naming and definition are in the centre of the argument:

*Met.* B 3, 998b4-8: From the viewpoint that we get to know each particular thing by its definiens and that the genera are the starting-points of definition, the genera must also be the principles of the things to be defined (definienda). And if to gain true knowledge of the things-there-are amounts to gaining it of the species after which they are spoken of (λέγονται), <you have to be aware that> it is at least (γε)<sup>44</sup> of the species that the genera are the principles.

<sup>44</sup> Thus the enclitic particle γε may also be used to single out a stronger case.

Along a similar line of thought, the question of how to focus upon the *infimae species* immanent in individuals leads to an inquiry into the proper nature of universality. As it turns out, universality takes its origin from the logical operation of abstraction and assignment:

*Ibid.* 3, 999a14-21: From these considerations, then, it appears that it is the appellations [i.e of the εἶδη] applied to the individual things that are the principles, rather than the genera. But once again, it is not easy to say how these<sup>45</sup> are to be taken to act as principles. For the principle or cause must be apart from the things of which it is the principle, and be capable of being isolated<sup>46</sup> from them. But for what reason should one assume any such thing to be alongside the particular, except in that it is said holding convertibly<sup>47</sup> and in all cases?

What according to Aristotle is not easy to say is not in what sense to take ‘principle’ in this context (which is suggested by the manuscripts reading ταύτας), but rather how to conceive of the things named after their lowest species. The difficulties, he explains, come up if one considers what it would entail to take things in their capacity of lowest species as principles. What is at stake here is the problem of universality and abstraction. Whereas to acquire knowledge of causes we are indeed required to take the εἶδος apart from the particular it inheres in, we should certainly not give in to hypostatizing it as a

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For γε giving emphasis to the word or words which it follows see Liddell & Scott, *s.v.*; Van Raalte (1993), 258.

<sup>45</sup> Reading ταῦτα instead of ταύτας. The form ταῦτα seems to give a more pregnant sense; moreover, ταύτας ἀρχάς (without a definite article) is less acceptable from the grammatical point of view. It should be noticed finally that our best manuscript (codex Parisinus 1853), as well as some of the Greek commentators and William of Moerbeke, read ἀρχάς after the verb ὑπολαβεῖν; see Ross, critical apparatus *ad loc.*

<sup>46</sup> I.e the principle can be taken apart logically, because it is formally different from the thing or its matter; see our discussion of the eighth aporia. At B 4, 1001a25, also the word κεχωρισμένη means ‘formally discernible’. For this logical sense of χωρίζειν see *Phys.* II 2, 193b33-34, and Bonitz, *Index*, *s.v.*

<sup>47</sup> Reading καθ’ ὅλου instead of καθόλου (Note that the phrase is juxtaposed to κατὰ πάντων). For the epistemonical requirement of καθ’ ὅλου as put beside καθ’ αὐτό in *APo.*, see my sections 6.34 and 6.7. The same sense of καθ’ ὅλου occurs at 1001a28-29: “For they [viz. ‘oneness’ and ‘be-ingness’] are convertibly said <of things>, not being something else, but just themselves.”; cf. Δ 18, 1022a35 in Ross *ad loc.* What Aristotle tries to say is that each and every particular thing is something one-and-be-ing, and to qualify for these predicates a thing’s not-being-something-else is required, unlike other kinds of attributes, such as ‘educated’ (μουσικός), which cannot apply to any being unless this is something else, viz. ‘man’. In *Phys.* II 3 the formula οὐ καθ’ ἑτέρων τι ἀλλὰ καθ’ αὐτό and its like play a key role in the discussion of the τρόποι τῶν αἰτίων; Bemelmans (1995), 87-95. The translators of this passage, commonly opposing at 1001a28-29 ἑτέρον τι to ταῦτα (instead of αὐτά), are inevitably stuck with a senseless αὐτά.

Platonic Form. To do so would be a serious offence against the postulate of the primacy of individual being. This problem, which is once more touched upon in the next aporia, will be thoroughly discussed in Book Z.<sup>48</sup>

The eighth problem is closely related to the previous ones, asking how individuals, which are infinite in number, can be epistemically known, considering once again that there is nothing real apart from individual being. Without the existence of common characteristics over and above individual being any such knowledge will be out of the question (995b31-36; 999a24-b24). This problem is called “the hardest of all and the most necessary of all to examine”. Once again, the principles’ ‘being isolated from the *pricipiata*’ is under discussion. The exposition of this problem is interesting in that it clarifies what is meant by expressions that signify the isolation of the principles (*χωριζομένην*, 999a19; *παρά*, 999a26, 30, 31, 33, 34 etc.). One of the arguments runs (B 4, 999b12-14): “Since matter exists apart from the concrete thing (*τὸ σύνολον*), because it is ungenerated, it is by far more reasonable that *οὐσία*, i.e. that which the matter is at any particular time, should exist.”<sup>49</sup> Thus the ‘being isolated’ or ‘by itself’ clearly refers to the matter’s *formal* difference from the concrete whole and the latter’s cause or principle. This formal difference will be discussed in *Met. Z* in terms of the concrete compound’s material constitution or condition of ‘materiality’.<sup>50</sup>

The apories nine and ten have no special bearing on method. The eleventh (996a4-9; 1001a4-b25) is regarded by Aristotle as “the hardest of all and the most indispensable”, when it comes to discovering what truly *is*. It bears on the precise meanings of the key terms ‘being’ and ‘one’ and aims at assessing their mutual relationships, and, by the same token, is concerned with the semantic analysis of things-that-are:

*Ibid.* 4, 1001a4-8: The inquiry that is both the hardest of all as well as the most indispensable for the discovery of what truly *is*, is whether

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<sup>48</sup> Failing to see that the ‘isolation’ is meant by Aristotle in the context of logic and does not bear on any kind of physical (or metaphysical) independence, Madigan thinks (1999, 79f.) that “the argument assumes that something predicated of a plurality of things is alongside those things and exists independently of them”; he thus seems to miss Aristotle’s anti-Platonic point.

<sup>49</sup> Again, Aristotle is anticipating the discussion of Book Z.

<sup>50</sup> The decisive difference between Plato and Aristotle is that unlike Plato, Aristotle does not hypostatize this formal difference.



what-is (τὸ ὄν) and what-is-one<sup>51</sup> (τὸ ἓν) are the ousiai of the things-that-are (and it is not by being something different that they are, the one of them 'one', and the other 'being'), or whether we must inquire what <taken by themselves> being-ness and one-ness are, on the assumption that they should have some other nature underlying them (ὑποκειμένης ἄλλης φύσεως).

Should the latter be the case, beingness and oneness will not be ousiai themselves, but attributes of some other underlying ousia, which must then be the main object of our inquiry instead of beingness and oneness.<sup>52</sup> The problem will be solved later on in *Met.* (Z 16, 1040b16-24, and I, 2, *juncto* M 8, 1083a20-1085a2) to the effect that Being becomes the focal concept, which is to be applied analogically to all kinds of beings, both essential and coincidental, whereas the concept of oneness is convertibly associated with 'being'.<sup>53</sup>

The twelfth aporia, which is closely akin to the ninth, again concerns the nature of the ontic principles: are they universal or should they be taken in the same way as individual things? (996a9-10).<sup>54</sup> Its explanation (B 6, 1003a7-17) again centres on the concept of universality, which is supposed to rule out the notion of 'being ousia' immanent in a particular, whereas the identification of an ontic principle with something individual would make it unknowable, because epistemonik knowledge of the individual is impossible. The passage contains some valuable hints about the nature of semantic analysis:

*Ibid.* 6, 1003a7-17: If they are universal, they will not be ousiai, for no common thing (οὐθὲν γὰρ τῶν κοινῶν) signifies a 'this' (τόδε τι) but rather a 'such-and-such' (τοιοῦνδε), while the ousia is a 'this'. If, however, we are allowed to posit (θέσθαι) what is universally assigned (τὸ κοινῇ κατηγορούμενον) as a self-contained 'this' (τόδε τι καὶ ἓν), Socrates will be several living beings: himself, and 'man', and 'animal', assuming that each of these common things signifies a self-contained 'this'. These then are the consequences if the principles are universals. If on the other hand they are not universals but of the

<sup>51</sup> I take the notion 'one' to refer to 'the state of being-one'. This is the key notion in the expression ἓν σημαίνειν, which is of paramount significance in Aristotle's semantics of terms.

<sup>52</sup> For this connotative use of 'be-ing' and 'one' see my sections 1.64; 7.33 and 9.34-9.35.

<sup>53</sup> The 11th aporia is extensively discussed in Berti (1979), 89-129, and Madigan (1999), 107-18.

<sup>54</sup> Ross's translation "universal or what we call individuals" seems to be beside the point, because the way we bring up the individuals for discussion is in order, not our use of the name 'individual'.

nature of particulars (ὥς τὰ καθ' ἕκαστα), they will not be knowable (ἐπιστητάι); for true knowledge of anything is universal. Hence if there is to be any genuine knowledge of the principles there will be other principles prior to them which are said of the latter universally (καθόλου κατηγορούμεναι).

This exposition of the problem of the universals, which also contains an allusion to what, from the thirteenth century onwards, features as the problem of the 'pluralitas formarum', will be solved in Z, chs. 13-15, *juncto* M, ch. 10.

The thirteenth aporia stated at 996a10-11 and explained at 1002b32-1003a5 is about the potentiality and actuality of the ontic principles. It will be solved in Θ, chs. 1-9, *juncto* Λ, chs. 6-7, in which the indispensable actuality of the First Mover is under examination.

The fourteenth and final aporia, stated at 996a12-15 and explained at 1001b26-1002b11, asks whether or not mathematical entities (numbers, lines, figures, and points) are a kind of ousia, and if so, whether they are separate from the sensible things or inherent in them. These questions will be solved in M, chs. 1-3; 6-9, and N, chs. 1-3; 5 and 6, where it is argued that the belief in the subsistence of numbers and other mathematical entities is untenable. In point of fact, this problem too is about correct semantic analysis. For looking for ousia we find that the various candidates among the things that constitute particular things — such as, apart from numbers etc., affections, motions, relations, states, and ratios — are equally unqualified to carry off the palm, the latter because they are all said of a substratum, but are not a 'this' themselves. The claims of the candidates are put to the test semantically: Do they *signify* ousia?, which is *the* requirement for which is to be a 'this', and not to be itself *said of* a substratum.

### 7.23 *Summary of Met. A, α, and B*

Recollecting now the many clues to Aristotle's method and the main tenets found in the introductory cluster, Books A, α, and B, the following points can be stated:

(1) In order to obtain genuine knowledge (ἐπιστήμη) of the outside things you have to search for their 'why', i.e. their 'cause and principle' (A, chs. 1-2).

(2) The causes and principles of things *par excellence* are their ontic principles, which are called their 'truth' (τὸ ἀληθές), and will be

identified later on (particularly in Z) as their εἶδος or ‘infima species’ (A, chs. 3-10).

(3) The nature of the ontic principle is explained in terms of ‘truth’ and φύσις (α, ch. 1). This ‘truth’ or ‘what-is-true’ in things (τὸ ἀληθές) is what scholastic authors called ‘ontological truth’ (‘veritas ontologica’), or ‘transcendent truth’ (‘verum transcendens’).<sup>55</sup> It will be discussed in Θ, ch. 10, and, *pace* Ross, should be well distinguished from the referent of propositional (or ‘statemental’) truth (‘veritas logica’).<sup>56</sup> The latter will be discussed by Aristotle under the label ‘what is qua <stated as> true’ (τὸ ὡς ἀληθές ὄν) and dismissed as a candidate for being the true ousia, in E 4.

(4) To correctly pinpoint a thing’s ‘why’ or ‘ontic principle’ you have to disclose the specific ontic feature it shares with other things of the same name (τὰ συνώνυμα), and call it up precisely under this common name (B 2, 996b13ff.).

(5) As early as in *Met.* α 1, 993b6ff., Aristotle highlights the almost insuperable difficulty of grasping a particular’s true being (οὐσίᾳ). When the particular is taken as a whole, i.e. as a compound of form and matter, its ontic cause cannot be equated with the ‘thing itself’ (αὐτό). The difficulty can only be tackled satisfactorily by considering the thing ‘as a whole *and* a part’, which boils down to taking the ‘part’ (viz. its εἶδος or ontic cause) *qua immanent* in the whole which is informed and given its specific being by this very part (B 3, 998b4-999a21).

(6) The proper scope and method of the discipline of metaphysics is clarified by showing how we should focus on a thing’s ontic causes (*ibid.*).

### 7. 3 *Metaphysics assessed among the disciplines* (Γ, chs. 1-3)

In the traditional ordering of Aristotle’s lectures on metaphysics (in Aristotle’s words, ‘first philosophy’), Book Γ stands at the beginning of his main discussion. It consists of three parts. In the opening

<sup>55</sup> Gredt II, p. 11, nr. 621. It is mostly defined from the epistemological angle, as on p. 48, nr. 660: “[...] veritas quae inest in simplici apprehensione intellectus et in cognitione sensitiva, est veritas ontologica”.

<sup>56</sup> Gredt, *ibid.*, II, p. 45, nr. 658: “Veritas logica seu cognitionis est adaequatio intellectus cum re”. Gredt rightly refers to Aristotle, *Met.* E 4, 1027b27, Θ 10, and *An.* III, 6. In *EE* I 8, transcendent good and its convertibility with transcendent ‘be’ are discussed. On these and the other ‘termini transcendentes’, my section 9.35.

chapter, the author briefly states the nature of the philosophical investigation of ‘what-is’ he is after, and defines it as the discipline that investigates that which is qua be-ing, as well as that which belongs to it ‘in its own right’ (καθ’ αὐτό), i.e. qua be-ing. The whole of ch. 2 and part of ch. 3 (up to 1005b8) deal with the status and the universal claims of this discipline as the single one covering all the relevant aspects of being as such. The remainder of ch. 3, and chs. 4–8 extensively discuss the two most fundamental axioms, the law of non-contradiction (LNC) and the law of excluded middle (LEM), the discussion of which is regarded as an integral part of the discipline of metaphysics.

### 7. 31 *Preliminary: Aristotle’s method and strategy. The key terms*

As always, in order to understand Aristotle’s method and strategy it is of vital importance to study his coining and use of key terms. The concepts and devices that play a key role in Aristotle’s expositions on the subject matter of metaphysics, all occur in the opening lines of Book Γ (*italics mine*):

*Met. Γ 1, 1003a21-32:* There is a *discipline* which studies *that-which-is qua thing-that-is* and those things that hold good of this *in its own right*. Now this is not the same of any of the so-called ‘partial’ disciplines. For none of the others examine universally that-which-is qua thing-that-is, but all cutting off some part of it study the attribute of this part; as for example the mathematical disciplines. Now, since we are seeking principles and the highest causes, clearly these must be a particular’s nature in its own right. If then those who sought the elements of *the things-that-are* were seeking the same principles, it would be necessary that the elements too are of that-which-is qua thing-that-is, not *coincidentally*. Hence it is of that-which-is qua thing-that-is that we also have to find the first causes.

#### (a) Ἐπιστήμη

The kind of investigation under consideration is called a kind of ἐπιστήμη. In this context, the rendering ‘discipline’ is preferred to the traditional rendering ‘science’<sup>57</sup> because of the nowadays too specialized connotation of ‘science’, while elsewhere the rendering ‘genuine, or epistemonic knowledge’ (plural: ‘pieces of genuine, or epistemonic knowledge’) will do most of the time.

<sup>57</sup> Cf. Kirwan (1971), 76.

## (b) Εἶναι and its cognates τὸ ὄν and οὐσία

The expressions ‘what-is’ and ‘the things-there-are’ translate the Greek phrases τὸ ὄν and τὰ ὄντα, respectively. Obviously the rendering ‘exist(s)’ is out of order. In any demonstrative investigation the ‘quia est’ is presupposed,<sup>58</sup> and although metaphysics is about existing things, the metaphysician is as such interested in the conditions of be-ing — including, of course, the preconditions of existence — rather than the thing’s actual existence itself. To be sure, throughout his discussions Aristotle is adamant about identifying the domain of particular existents as the proper object of his inquiries, but they are taken in virtue of their immanent forms, and the latter can even be examined irrespective of their actually being enmattered. In questions of fact, any metaphysical investigation, including Plato’s, starts from particular beings of the outside world as its objects.

What is distinctive of Aristotle’s metaphysics is the coalescence of two forms of metaphysical abstraction. One is merely formal, by which a thing’s being (form or ontic cause) is taken apart from its actually inhering in a particular; the other represents a degree of abstraction in which this immanent form (ontic cause) is taken including its inherence in matter, as a result of which the outside particulars appear to include their ‘material constitution’ (Ackrill) or ‘condition of materiality’.<sup>59</sup> On the whole, Aristotle’s metaphysical investigation aims to arrive at that special focalization that will enable us to apprehend the outside particulars qua beings, that is to say, under the specific aspects of *their* mode(s) of being.<sup>60</sup>

## (c) The phrase τὸ ὄν ἢ ὅν

As early as in Ancient times there was a dispute about the proper domain of metaphysics. The question was whether the phrase τὸ ὄν ἢ ὅν (‘being qua being’) should comprise everything whatsoever, or only some among the things-that-are (τῶν ὄντων).<sup>61</sup> The adherents of the latter view believe they can find some support at E 1, 1026a23-32, *juncto* K 7, 1064a28-33, where the former passage is paraphrased by

<sup>58</sup> My section 6.51.

<sup>59</sup> Compare the semantic Main Rules RMA and RSC; my section 1.71.

<sup>60</sup> The notions of εἶναι and its cognates, τὸ ὄν and οὐσία are extensively discussed in my section 1.6.

<sup>61</sup> It has also been a hot question in the Middle Ages; see Zimmermann (1965; 21998) *passim*.

the author of Book K (epitomizing E). However, it is patently clear from Aristotle's own words in 1026a23ff. that he regards the view that metaphysics comprises only a certain province of the 'things-that-are' as merely an aporetic alternative, an idea he will cast aside in unequivocal terms at the end of the passage: "And it will fall to this [viz. first philosophy] to study that which is qua thing-that-is, i.e. both what it is and the things that hold good of it qua thing-that-is". In this passage Aristotle is contrasting first philosophy with the 'partial' disciplines which all confine themselves to the study of a special province of beings ("a particular thing-that-is"; 1025b8).

Therefore Ross is indisputably right when he points out (I *Introd.*, XIX) that *Met.* E itself combines the view that metaphysics studies unchangeable being with the view that there are no limits to the domain of things it studies. The central books ZHΘ are in the main concerned with οὐσία qua formal entity, which is common to both sensible and non-sensible ('unchangeable') being, and is thus the "principle and highest cause" of 'that-which-is' that his inquiry is looking for.

You might still object that there is something telling in Guthrie's judgement that the answer given by Aristotle — "this astonishing man", as Guthrie calls (VI, 216, n.1) him — to what he has himself called the eternal question of the nature of being may have contained inconsistencies and may prove hard to explain.<sup>62</sup> However, when we weigh Aristotle's words carefully from the viewpoint of his own semantics, what is regarded by Ross as two complementary views combined proves to be in fact just one single view. Considering the principle of categorization including the *qua*-operator, what Aristotle tries to make clear is that the philosopher is *solely* interested in the formal cause of that-which-is. Anything whatsoever can be the object of his study, but only 'inasmuch as' (ἐν, 'qua') it is affected by that formal cause.<sup>63</sup> It is precisely Aristotle's claim that by approaching the

<sup>62</sup> Guthrie (1981), 203f.

<sup>63</sup> See the excellent discussion of the proper sense of 'being qua being' in Leszl (1975), 145-76, and Hafemann (1998), 17-20. Kirwan (1971: 77f.) fails to understand this and keeps regarding the 'both-and' as a 'first-secondly', concerning "truths that hold good of every-thing-that-is", and "truths that hold good of concepts [sic! De R.] that hold good of every-thing-that-is" (78). Ross too (I, 252f.) keeps on speaking of Aristotle having "in the main two ways of stating the subject-matter of metaphysics", which he opposes as the broader and the narrower views; he assumes them to be subjected to an attempt to be reconciled in Book E. Paul Natorp even went so far as to regard them as irreconcilable and made this a ground for splitting up the *Metaphysics* into two different works (*Philos. Monatsheft* XXIV

things in the outside world in this way one is able to explain them satisfactorily.<sup>64</sup>

(d) The use of συμβεβηκός ('coincidental')

Taken in its technical sense, the term συμβεβηκός concerns the counterpart of what is at stake in the previous section. Kirwan (1971, 76f.) rightly argues for the rendering 'coincidental'. The Greek word is the perfect participle of the verb συμβαίνειν, literally 'to come together', 'to meet'. It either means 'to coincide', and is said of two (or more) things that by the act of meeting come to have a symmetrical relationship, or 'fall to one's lot', 'come to', said of two things one of which joins the other, owing to which the two come to stand in an asymmetrical relationship.<sup>65</sup>

In the latter case, what is συμβεβηκός is an attribute of something else underlying it. Also in common Greek the perfect infinitive συμβεβηκέναι sometimes means 'to be an attribute or characteristic'.<sup>66</sup> Thus the plural participle συμβεβηκότα came to signify things which *have come to* something else, most of the time with the connotation that they could well have been missing.<sup>67</sup> The current translation in modern languages, 'accident', fails to make people recognize this etymology, because a corresponding verb is lacking.<sup>68</sup> Anyway, the asymmetrical relation implied in the Greek συμβαίνειν and συμβεβηκός is better preserved in 'to coincide' and 'coincidental' than in '(to be an) accident'.<sup>69</sup>

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(1887), 37-65, 540-574).

<sup>64</sup> My section 13. Aristotle's use of the *qua*-functor is extensively discussed in my sections 2.73-2.76.

<sup>65</sup> Also Gómez-Lobo (1966), 55-8.

<sup>66</sup> Liddell & Scott report Thucydides II, 15: "This was a characteristic (συμβεβηκεῖ) of the Athenians". For Aristotle's frequent use of συμβαίνειν in its other tenses see Bonitz, 713a15-b43 ('turn out', 'result', 'follow', esp. logically).

<sup>67</sup> *Pace* Kirwan, Aristotle also knows of necessary, or even eternal, accidents, which are defined (*Met.* Δ 30, 1025a30-31) as 'all that attaches to each thing in virtue of itself but is not included in its quiddity', e.g. "having its interior angles equal to two right angles attached to the triangle". It is this kind of συμβεβηκός that plays an important role in the doctrine of *APo.*, as well as in practical argument elsewhere; see Bonitz, *Index*, 713b49-71419, who precisely presents the passages in which Aristotle applies what I have called the devices of 'focalization' and 'categorization'.

<sup>68</sup> Unlike English, French and German, Dutch has preserved the Latin etymological connection ('accidens-accidere') in its corresponding words ('bijkomstig', which is a cognate of the verb 'komen bij' = 'to fall to').

<sup>69</sup> Cf. *Met.* Δ 18 and Δ 30; *Top.* I 5, 102b4-7; *APo.* I 4, 73a34ff; *Pol.* I 9, 1257a9-13;

(e) The phrases καθ' αὐτό and κατὰ συμβεβηκός

These phrases serve for singling out special modes of being possessed by an object under examination. The former aims to focus on the object's essential mode of being, the latter on a coincidental one. It is pertinent to realize, however, that the essential character of a mode of being ultimately depends on the investigator's focus of attention, rather than just the object's nature as such. Thus, say, Coriscus's being a man can on occasion be taken to be coincidental, and his being a master essential, if, that is, his relationship to his slave Callias is under consideration (e.g. *Cat.* 7, 7a28-b7). In point of fact, the two phrases serve as adverbial expressions indicating the special ways in which objects are addressed, either with reference to an essential aspect (καθ' αὐτό) or a coincidental one (κατὰ συμβεβηκός), essential or coincidental, that is, with regard to the point of view taken in a certain discussion or investigation.<sup>70</sup>

### 7. 32 *The unity of metaphysics*

The unity of metaphysics could be called into question, owing to the fact that the expression designating its proper subject matter, 'what-is' is not used in one single sense. In fact, Aristotle had already raised an objection to that effect in the *Eudemian Ethics*, where he deals with the various senses of 'good' and, by the same token, of 'being' or 'what-is'. Recalling the division of both 'being' and 'good' over the ten categories, he infers (I 8, 1217b33-35) that just as what-is is not one in all things, neither is what-is-good, so that there is not one discipline either of what-is or of what-is-good.

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*EE* III 4, 1232a1. Bonitz 713b43-714a3; De Rijk (1980), 26-33; Kirwan, 180f. Also my section 8.32.

<sup>70</sup> Kirwan (1971), 76-8; 200; De Rijk (1980), 26-33. Also Barnes (1971), 94; Wedin (1978), 181-88 and my sections 8.23; 8.31-8.32. It is pertinent to realize that these labels are not intended by Aristotle to mark off two separate ontological domains. It is all a matter of how we focus on the different modes of being belonging to the object under examination. Gómez-Lobo (1966, 65ff.) rightly stresses that κατὰ συμβεβηκός primarily concerns a respect (κατά; "eine Perspektive") after which a mode of being can be assigned to an object. However, in the customary fashion, he continually (esp. 88ff.) takes the use of the labels καθ' αὐτό and κατὰ συμβεβηκός in the context of statement-making instead of naming, and to refer to two separate ontological domains (esp. 140ff.). In addition, his view of 'predication' is, like Tugendhat's (1958) charged with Heideggerian obscurity.



In the opening lines of the present chapter, Aristotle takes the edge off this objection by pointing out that the phrase ‘what-is’ is used in more than one sense — in his words: “that-which-is is worded in different ways” — but always “with reference to one thing, i.e. one particular nature”, just as the designation ‘what-is-healthy’ has more than one sense, but in such a way that all referents somehow relate to the common nature ‘health’. Similarly, ‘what-is’ belongs to a class of expressions which are neither synonymous nor merely equivocal, but represent various relationships to one focal meaning which is representative of the common nature found in some way or another in all things entitled to the common name, ‘be-ing’. Thus with reference to one starting-point, some things are said to ‘be’ because they are substances, others as affections of subsistent things, others as representing a progress towards substance or destructions, privations, or qualities of substance, and so on; others even while being negations of these things (viz. affections etc.) — or of subsistent being itself, so that even of non-being we say that it *is* non-being (2, 1003a33-b10).

The first sentence (1003a33) calls for a general remark from the viewpoint of semantics. Kirwan rejects any rendering that takes the phrase τὸ ὅν to be autonymously used to stand for the *expression* ‘that-which-is’. It is things, not words that λέγεται πολλαχῶς, that is, ‘are worded’ or ‘so called’ (Kirwan), or ‘brought up for discussion in different ways’. As we have stated above, things can be brought up for discussion in different ways by using various categorizations. This does not rule out, however, the fact that the concrete things of the outside world *are* all subsistent entities, but for the sake of argument they may be brought up for discussion in various ways, according to their subsistent nature or ousia, or one of their non-substantial attributes. Thus a courageous man’s, say, Socrates’s, being-a-man is of a different nature from his being-courageous, but they are nothing other than two different modes of be-ing of one and the same entity, Socrates.

Kirwan (1971, 79f.) asks whether this difference is “enough to justify the thesis that ‘exist’ has different senses in the two cases”.<sup>71</sup> He believes that the question is not easy to answer because there is no clear criterion for the difference in senses. He even goes so far as to find this difficulty strong enough to support the objection of *EE* that

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<sup>71</sup> Kirwan implicitly admits (and rightly so) a rendering like: “‘be’ is used in several ways”.

no discipline can have all existing (sic!) things as its subject matter. I am afraid his remarks are entirely beside the point. First, the 'is' in 'what-is' should not be narrowed down to 'exists', as we have seen before, so that any talk about two different senses of 'existence' is bound to confuse the issue. Taking Kirwan's example, the only 'existent' is the particular courageous man, who possesses one subsistent mode of being underlying manifold attributes (coincidental modes of being), among which his being-courageous. More importantly, to discern a thing's different modes of being does not amount to discovering conflicting ways of being in it, but merely concerns our mutually opposing various aspects of its being ('modes of being'). That is what categorization is all about. In addition, Guthrie (VI, 207) seems to be right in evaluating the objection found in the *EE* by pointing out that in the present context Aristotle is concerned with all what-is simply qua being, rather than, as in the objection, roughly with things being or being-good in various ways.

Kirwan (80f.) also raises a problem about the inclusion at 1003b9-10 of denials among the things-that-are. He has rightly observed that when speaking of negations (ἀποφάσεις), Aristotle does not have negative statements in mind, but negative states (of affairs) or incomplete dictums, like 'not-being-white', which may be said of something. However, I am at a loss when it comes to making anything out of Kirwan's explanation (81) of the supposed difficulty — that the lines b9-10 suggest that denials are among the things-that-are — not to mention the fact that he continues to confuse 'being' and 'existing'. Aristotle's words are merely an addition: "that is why to assert that even what-is-not is a thing-that-is-not", and so are merely a prelude to his recognizing 'being as truth' and 'non-being as falsity'. The latter is in fact the mode of being of 'things' ('statable things' or 'states of affairs') asserted, and therefore must not be excluded from our investigations in advance. His saying 'even' anticipates the subsequent dismissal (in *Met.* E 4) of this mode of being.<sup>72</sup>

At 1003b11-16 Aristotle explicitly infers from the foregoing that, just as everything that is healthy is covered by one discipline, it is also one discipline that covers the things-that-are qua things-that-are. Kirwan (81) thinks that the analogy is not appropriate to substantiate Aristotle's claim about the status of metaphysics as the one discipline dealing with the that-it-is of all things there are, because "the

<sup>72</sup> See *Met.* E 2, 1026a35 and 4, 1027b18-1028a4.

metaphysician, even though he knows about substance, and though every existing thing is somehow connected to substance, cannot pronounce on the question 'What exists?' which is a job for many specialists".

It need not come as a surprise that once again his confusion of 'being' and 'existing' is responsible for Kirwan's difficulty. For Aristotle, the metaphysician's claim does not concern a thing's actual existence as such, but its ontic nature, including, admittedly, its existential (pre)conditions. He readily leaves the question of τὸ ὄν ('quia est') to the specialists, just as the latter leave whatever concerns the τί ἐστὶ ('quid est') of their proper subjects, including their attributes, up to the philosopher, and confine themselves to the assumption of the quiddity of these properties and proceed to examine their application from there, each in their own discipline.<sup>73</sup> That this is what Aristotle has in mind may also appear from 1003b16-22, in which the author argues that in every case a discipline chiefly deals with that which *is* primarily, i.e. that which the other things depend upon and in virtue of which they get their designations ('appellations').<sup>74</sup> Thus metaphysics has to generically<sup>75</sup> study of all species of 'what *is*' the object's causes and principles, while its parts have to study the specific parts of the domain of metaphysics, all focussing on what-it-is qua thing-that-is. At 1004a2-9 these sub-domains are referred to as the parts of philosophy that are as many as there are ousiai, and the division and specialization of first philosophy is compared to mathematics, which also has a primary and a secondary discipline, and others successively, within its domain.

### 7. 33 *The convertibility of 'being' and 'one'*

The subsequent paragraph (1003b22-1004a2) is commonly supposed to flatly interrupt<sup>76</sup> the run of argument. Kirwan (82) takes it as an

<sup>73</sup> See *Met.* Γ 2, 1005a11-13 and E 1, 1025b11-14.

<sup>74</sup> For the meaning and significance of designation see our *Index*, s. v. 'categorization'. The natural philosopher, too, studies the outside things in view of their ousia, so physics is itself an important branch of ontology. See *Met.* Z 11, 1037a15-20.

<sup>75</sup> When he speaks of γένος and εἶδη in this context, Aristotle has a class and its sub-classes in mind, rather than genus and species in the technical sense; for this non-technical sense of γένος see Bonitz, *Index*, 152a21-37.

<sup>76</sup> That there is a digression inserted may also be gathered from the apparently seamless linking up of 1004a3ff. with 1003b19-22. On the other hand, Alexander's proposal (CAG I, p. 246<sup>13</sup>) to insert 1004a2-9 right after 1003b22, and that of

insertion made by Aristotle or his editor to show that things-that-*are-one* divide in the same way as things-that-*are*. However, his assumption ignores the corollary found at 1003b34-36 to the effect that there are as many kinds of one-ness as there are of being-ness. This thesis leads Aristotle to discuss the various appurtenances of oneness, and so gives him the opportunity to solve the problem raised earlier (at B 1, 995b19-25). The question was whether our metaphysical investigation is concerned only with ousiai or with their essential attributes as well, among which those designated by notions such as 'the same' and 'other', 'like' and 'unlike', and 'contrariety', which are all more easily opposed to 'one-ness' than to 'being-ness'.<sup>77</sup> In Aristotle's argument we find a short discussion of a metaphysical issue which has been of paramount importance in Ancient and Medieval metaphysics since Parmenides' days, viz. the convertibility of 'being' and 'one'.<sup>78</sup>

In his discussion Aristotle first brings up the thesis of the convertibility of the notions 'being' and 'one' — which obtains despite their being formally different, as clearly appears from their respective definitions<sup>79</sup> — introduced by the phrase εἰ δὴ, which, like Latin 'siquidem', is frequently employed for 'if, then', used equivalently with 'since', or 'granted it is true, then'. The convertibility of the two notions is semantically supported in a twofold way: (a) when added to

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Schwegler and Natorp, who are followed by Ross, to insert it after 1003b19 should also be taken into consideration. Anyway, either 1003b22-1004a2 or 1004a2-9 seems to occur in the wrong place in the text handed down.

<sup>77</sup> At *Mel.* Δ 15, 1021a9-12 it is said that the Equal, the Like, and the Same are defined in terms of the One. See also *Mel.* I 3, 1054a29-32: "To the One belong (as we have indicated graphically in our distinction of the contraries) the Same, the Like, and the Equal, and to the Many belong the Other, the Unlike, and the Unequal". Cf. Alexander, CAG I, p. 250<sup>17-19</sup>: "For the proof that practically all contraries are referred to the One and the Many as their first principle, Aristotle sends us to the *Selection of Contraries*, where he has treated expressly of the subject" (Oxford Translation XII, 122). Cf. *ibid.*, 262<sup>18-26</sup>; ps.-Alexander CAG I, pp. 615<sup>14-17</sup>; 642<sup>38</sup>, 643<sup>3</sup>; 695<sup>23-26</sup>; Asclepius CAG VI-2, pp. 237<sup>11-14</sup> and 247<sup>17-19</sup>; also Syrianus CAG VI-1, p. 61<sup>12-17</sup> quoted n. 83 below.

<sup>78</sup> In the Middle Ages the terms 'ens' and 'unum' together with 'verum', 'bonum', 'res', and 'aliquid' were called 'termini transcendentes' (never 'transcendentalia' by the way, as became customary in Late Scholasticism), meaning terms that can be said of things when taken apart from their predicamental ordering, i.e. prior to their being differentiated by the ten categories ('praedicamenta'); see my section 9.35. For the intimate association of oneness and beingness see *ibid.*

<sup>79</sup> Section 9.35. What is denoted by τὸ ὄν is extensionally or referentially the same as what is denoted by τὸ εἶν and their sameness guarantees the convertibility of these notions. Alexander aptly glosses (CAG I, p. 246<sup>31</sup>) the phrase τῷ ἀκολουθεῖν ἀλλήλοις ('by mutual implication') by κατὰ τὸ ὑποκείμενον ('according to the material substratum').

a common noun, such as ‘man’, the elements ‘one’ and ‘being’ do not act as a significative sememe supervening the meaning of the common noun,<sup>80</sup> and (b) neither of them adds something to the other, when both are added to a common noun. In Aristotle’s words:

*Met.* Γ 2, 1003b26-1004a2: Indeed ‘one-man’ and ‘man’, as well as ‘being-a-man’ and ‘man’, are the same thing; and the doubling of these words in ‘one-man’ and ‘man-being-one’ does not bring about any difference; and clearly, in the case of coming-to-be or of ceasing-to-be, ‘thing’ and ‘be’ go together, as also holds of ‘thing’ and ‘one’. Hence it is obvious that (a) the addition in these cases does not alter the <noun’s> meaning, and that (b) ‘one’ is not anything over and above ‘being’ either. Further, the substance of each particular is one non-coincidentally, and so is what precisely a thing *is* (ὅπερ ὄν τι). All this being so,<sup>81</sup> there must be as many kinds of oneness as of beingness,<sup>82</sup> and the precise nature of what concerns these <kinds> (περί ὧν τὸ τί ἐστὶ) is the task of a discipline which is generically one — I mean, for example, <the discussion> concerning the same and the like and the other notions of this kind. Practically all contraries derive from this origin [viz. beingness and oneness]. Let us take them as having been investigated in the *Selection of Contraries*.<sup>83</sup>

Thus the fifth aporia raised in Book B has been answered in the affirmative.

The notion of ‘being’ is commonly (Ross, Tricot, Kirwan) taken as equivalent to ‘existing’, quite wrongly as we have argued before. This confusion has led Kirwan (82) to question Aristotle’s view of the convertibility of τὸ ὄν and τὸ ἔν, and to object “that although e.g. ‘Lysistrata is a woman’ and ‘Lysistrata is one woman’ are true, ‘Lysistrata is an *existing* [his italics] woman’ is false”. In his answer to the

<sup>80</sup> For this connotative being see my sections 1.64; 7.33; 9.35.

<sup>81</sup> In the Greek text the apodosis of the long protasis (1003b22-33) begins here; see Ross *ad loc.*

<sup>82</sup> The word order in the Greek text is the other way round: “of beingness as of oneness”. This may be compared to the remarkable sense the phrase A οὐδὲν μᾶλλον ἢ B (as Latin ‘non magis quam’) more than once has, viz. ‘A as well as B’ instead of ‘B as well as A’. For this construction see De Rijk (1950), 314-8.

<sup>83</sup> For this work Ross refers to *Fragmenta*, nrs. 115-121 Rose (= 118-24 Teubner), = 1478b35-1479a5, and 1497a32-1498b43, ed. Bekker. See also Syrianus CAG VI-1, p. 61<sup>12-17</sup>: “The Same, the Like, the Equal, the Straight, and in general the things on the better side of the list of cognates, are differentiae and as it were species of the One, as those on the wrong side belong to the Many. The Philosopher himself devoted a separate chapter to the subject, making a selection of all contraries and classing some under the One, others under the Many”; cf. Aristotle, *Met.* Γ 2, 1004b27-29. Simplicius (CAG VIII, p. 382<sup>7-10</sup>) tells us that Aristotle seems to have taken what he says about contraries from the Archytean book entitled *On Contraries*, which he did not group with his discussion of genera, but thought worthy of a separate treatise”; cf. *ibid.*, 407<sup>15-20</sup>.

objection, Kirwan seems to admit on Aristotle's behalf that if Lysis-trata is a (one) woman she must exist some way or other (e.g. in a play), "since the absolutely non-existent is uncountable". Kirwan's failure to recognize the nature of metaphysical 'being' by continuously blurring it with actual existence seems to lead him further into the woods when he starts to confound metaphysics with mathematics in associating metaphysical oneness with arithmetical unity and counting.<sup>84</sup>

What exactly metaphysical oneness is is explained once more in the lines 1003b32-33 ("Further the ousia of each particular is one non-coincidentally, and similarly is what precisely a thing *is*"): it is *the* characteristic of a thing's essence.<sup>85</sup> So this sentence has nothing obscure, *pace* Kirwan, who mistakenly explains Aristotle's words in terms of extensional logic, saying "substances are identical with the class of entities whose substances they are", instead of taking them intensionally, referring, that is, to a thing's essence, irrespective of its being part of a class of their likes.

#### 7.4 *The semantic strategy revisited*

After having pointed out (at 1004a9-25) that the discipline of metaphysics should also study the opposites of the several kinds of oneness, in the final part of this chapter (1004a25-1005a18) Aristotle goes on to lay down his semantic strategy to be followed when assigning attributes. And again categorization is the predominant device of this strategy:

*Met.* Γ 2, 1004a25-31 : Since all things are named with reference to what is primary — as for example all things called one to the primary One — we must say that this holds good also of the Same and the Other and of the contraries in general. Hence we have (1) first to distinguish the various ways in which each may be assigned [viz. to a thing], and then (2) to determine, with reference to what is primary in each class of appellation<sup>86</sup>, in what relation to the primary it is so

<sup>84</sup> Aristotle accurately distinguishes between arithmetical unity (ἐν ἀριθμῷ) and metaphysical oneness or indivisibility, as appears e.g. in the passage quoted as well as at *Met.* Γ 4, 1006b3ff., where the notion of τὸ ἐν σημαίνειν is explained; see my section 7.72. Also *Int.* 11, 20b15-19; *Met.* Γ 4, 1007b10; Z 12, 1037b10-12.

<sup>85</sup> For 'one' as the twin notion to 'be' see my sections 1.64; 9.35.

<sup>86</sup> The Greek κατηγορία in its technical sense means 'name' or 'appellation'; the common translation 'predicate' will also do here, as long as it is not taken as 'sentence predicate'; De Rijk (1988), and my sections 2.41; 4.1-4.2. The phrase ἐν

named; for some things will be so named from possessing it, some from producing it, others in other such ways.

Evidently in this passage Aristotle is extending his claim about ‘what-is’ in the opening lines of this chapter (1003a33-b10) — to the effect that the various senses of ‘what is’ are all related to its focal sense — to include the cognate designations mentioned above, viz. ‘what-is-one’, ‘what-is-the-same’, ‘what-is-the-like’ etc. These too are assigned to things, and must be evaluated in accordance with their relationship to the focal meaning. We must not forget that it is by relating the various appellations assigned to things to their respective focal meanings that the metaphysician tries to display the true nature of each particular, no matter under what appellation it is initially brought up for discussion. Owing to this procedure he is able to explain each thing’s quiddity in showing its causes and principles as designated by the focal meaning of the notion involved.

#### 7. 41 *Categorization and using the qua-locution*

What the semantic procedure Aristotle has in mind amounts to once more becomes clear in the next passage. After repeating (1004a31-b1) his claim about the comprehensive nature of the discipline of metaphysics and the all-embracing task of the philosopher, the author rhetorically asks (1004b1-4) his audience who, if not the philosopher, will investigate whether Socrates and Socrates seated are the same thing, or — supply: if things are not considered the same — whether one thing is contrary to <just> one, or what the contrary is, or how many meanings it has; and similarly with all other such questions. Next, the fifth aporia of Book B is answered, and the philosopher’s task is once more contrasted with the specialists’. In the same breath the semantic procedure is recalled:

*Met.* Γ 2, 1004b5-17: Therefore, since these things are in their own right modifications of that which is one qua one and of that which is qua thing-that-is — not qua numbers or lines or fire — clearly it pertains to that discipline to make intelligible their quiddity [viz. of

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ἐκάστη κατηγορία does not mean ‘in each particular case of appellation’, but ‘in each class of appellation’, to wit, in the present cases, in the class of oneness or sameness, and so on, in each of which the semantic procedure concerning the assignment of attributes should be followed. So the meaning of κατηγορία in this context is halfway between ‘category’ in the technical sense and ‘name’ or ‘appellation’.

what is one qua one etc.] and that of their attributes.<sup>87</sup> And those who examine these questions [viz. the specialists as well as the one-issue philosophers of the past] are at fault, not as if they were not philosophizing, but because ousia is prior [than numbers, lines etc.], of which they have no comprehension. For just as there are modifications distinctive of number qua number (as for example oddness, evenness, commensurability, equality, excess, deficiency), and these hold good of numbers both in their own right and with respect to one another, as similarly the solid, changeless, changeable, weightless, and what possesses weight have other distinctive properties — so too there are certain properties distinctive of that which is qua thing-that-is. And, these are the things of which it is the philosopher's department to investigate the truth.

That to study also the attributes of ousia is the philosopher's department is indicated by the practices of his rivals, the dialectician and the sophist, who mimic him (τὸ αὐτὸ μὲν ὑποδύονται σχῆμα) in their endeavour to deal with things in an equally comprehensive way (1004b17-26).<sup>88</sup> A final argument in favour of the idea that the metaphysician should also deal with the attributes of οὐσία, including what is signified by designations cognate to 'what-is (-one)', like 'what-is-the-same', 'what-is-contrary' etc., is taken from the fact that almost all previous thinkers had focussed on contrary principles as the true causes of that which is, viz. odd and even, hot and cold, limit and limitless, love and strife (1004b27-1005a8).<sup>89</sup>

The next passage (1005a5-11) looks like a parenthesis, because the lines a11-13 introduced in most of the manuscripts with the formula διὰ τοῦτο ('that's why') may be regarded as a corollary drawn from the lines a2-5, with which it directly connects, rather than from a5-11.<sup>90</sup> On the face of it, it seems to qualify the applicability of the strategy recommended in the present chapter. After having repeated (a2-5) the thesis he has argued for throughout the previous paragraphs — that all things either are or are made up of contraries, and contraries originate in the One and the Many, and thus all pertain to one discipline — the author proceeds to add: "*whether or not* they are called what they are by virtue of one thing", thus apparently undermining the fundamental role of the philosopher's strategy of

<sup>87</sup> Of course, their essential attributes are meant, not "the things coincidental to them" (Kirwan). For the significance of the *qua*-locution in Aristotle see my section 2.7.

<sup>88</sup> For the universal pertinence of dialectic also *SE* 11; *APo.* I 11, 77a29ff.; *Rhet.* I 1, 1355b8ff. and 2, 1358a10ff.; cf. *Top.* I 14. See also Leszl (1975), 293-301.

<sup>89</sup> The argument is nicely analysed in Kirwan (1971), 85.

<sup>90</sup> Kirwan (1971, 85f.) takes the parenthesis not to begin until 1005a8.



concentrating on the universal applicability of the focal meaning of the respective notions, ‘be-ing’, ‘one’, ‘same’, ‘other’, ‘contrary’ etc.

That the paragraph expresses a qualification of his previous claim seems to be the more compelling as in the next sentence the negative case is given the benefit of the doubt: “probably the truth is that they are not”. In the parallel passage adduced by Kirwan from *EN* (I 6, 1096a23-28), Aristotle also seems to deny ‘universality’ (to follow for the time being the common interpretation of καθόλου)<sup>91</sup> to the Good and the One — including their focal meanings, it may be assumed — saying that the Good cannot be anything universally (καθόλου) common and one, on the ground that it may be so called in as many ways as that which *is*. The same notion of the putative ‘universality’ is more explicitly found in the remainder of our passage, but in this case it is clearly linked up with the recognition of the central function of the focal meaning within the notions ‘one’, ‘contrary’ and the like:

*Ibid.* 2, 1005a6-11: Nevertheless, even if that which is one is so called in several ways, the others will be so called with reference to the first [viz. the one represented by the focal meaning]; and equally so will contraries. <This is so>, even if that which is, or that which is one, is not καθ’ ὅλου and the same in every instance, or <is not> χωριστόν — as in fact it probably is not: some are <one qua> related to one thing, others owing to serial succession.

However, the common reading (or rather orthography) καθόλου (instead of καθ’ ὅλου), should be questioned, including its being rendered in terms of just universality.

#### 7. 42 *On the use of the phrase καθ’ ὅλου*

The crux of the previous passage seems to lurk in the words καθ’ ὅλου and χωριστόν. I presume that the former term should read, as in several other places in Aristotle, particularly in *APo.*,<sup>92</sup> as the two-words expression καθ’ ὅλου, meaning, not ‘universally’ (= κατὰ πάντος or κατὰ πάντων), but ‘commensurately applying’. It indicates the convertibility of a name designating a certain attribute, B, and the one denoting its substrate, A, rather than merely the universal applicability of the attribute, B, to its substrate, A. What Aristotle is in fact trying to make plain in this passage, I think, is that taken in other

<sup>91</sup> See, however, my section 7. 32.

<sup>92</sup> See De Rijk (1993), 78-81, and my sections 6.34 and 6.7.

senses than the focal meaning, the notions designating the attributes under consideration may not be regarded as straightforwardly convertible with those indicating their substrates. For example, 'man's-being-a-boy', 'man's-being-adult', 'man's-being-aged', when all said of, say, Socrates, are referentially the same as 'Socrates's-being', but not convertible with him, and quite logically so, because, were they all really convertible with the substrate, they would also be mutually convertible and all have the same meaning, which is absurd.

This interpretation of Aristotle's words finds some support in what is found concerning the notions 'same' and 'one' in the *Lexicon*, Book Δ. In his discussion about the coincidental sameness of 'man' and 'educated' (μουσικός) in a man, e.g. Socrates, he says (Δ 9, 1017b27ff.) that both the man and \*'the educated'<sup>93</sup> are said to be the same as the educated man, and the other way round. Then the author continues:

*Met.* Δ 9, 1017b33-1018a3: This also explains why all these designations are not assigned commensurately (καθ' ὅλου); for it is not true to say that in every instance man and the educated are the same, for commensurate attributes fall <to things> in their own right, but coincidental ones do not in their own right. But in the case of particulars we do so speak boldly, for Socrates and educated Socrates are thought to be the same thing.

The phrase καθ' ὅλου (which, as we just have seen, is commonly, but wrongly read καθόλου and rendered 'universally') concerns the convertibility of terms, not a term's universal applicability, as is patently clear from the fact that attributes assigned universally are not necessarily assigned in their own right, e.g. in Aristotle's statement "A fourth form of democracy is when all the citizens meet to deliberate about everything" (*Pol.* IV 14, 1298a28-30). And in his discussion of oneness at Δ 6, Aristotle brings up specific oneness as one of the various senses of 'one':

*Ibid.* 6, 1016a32-36: Again, all those entities are called one whose definiens expressing what-it-is-to-be (ὁ λόγος ὁ τὸ τί ἦν εἶναι λέγων) is indivisible from another definiens which indicates them as the thing in question [...]. In this way even that which has grown or is diminishing is one, because its definiens is one [...]. In general those entities the thought of whose quiddity is indivisible and cannot be kept apart in time or place or definition, are most of all one, and of these

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<sup>93</sup> Unfortunately, English idiom does not allow the use of this form in the singular, but if we add makeweights, such as 'thing' or 'person', the Greek may appear to be rather pointless or just trivial.

especially those which are substances. For in general those things which do not admit of division are called one in precisely that respect in which they are without it, as, for example, if they are without division *qua man* they are one man, if *qua animal*, one animal, if *qua magnitude*, one magnitude.

The above quotation from Δ 6 also makes plain what the phrase οὐ χωριστόν occurring in the parenthesis at Γ 2, 1005a10 refers to. It is most likely to be equivalent with ἀδιαίρετος as used at Δ 6, 1016a33 and b1, which seems to be confirmed by the fact that at 1016b2 it is paraphrased μὴ δύναται χωρίσαι ('cannot be separated').

As to Aristotle's speaking in the parenthesis of 'one by serial succession' (Γ 2, 1005a10-11), there is an interesting passage of the *Politica* which can throw some light on what Aristotle may have had in mind when he used this expression. This passage is concerned with the exact identity of things that have a successive nature, such as rivers and cities:

*Pol.* III 3, 1276a34-b1: Shall we say that as long as the race of inhabitants, as well as their place and abode, remain the same, the city is also the same, although the citizens are always dying and being born, in the same way as we call rivers and fountains the same, although the water is always flowing away and coming again? Or shall we say that the generations of men, for a similar reason [viz. as in the case of rivers and fountains], are the same, but the state changes?<sup>94</sup>

All things considered, far from being an unclear and arduous "intrusion" (Kirwan), the parenthesis presents us with another valuable suggestion in order to understand Aristotle's view of the philosopher's semantic strategy.

The chapter winds up with, first, offering (1005a11-13) a corollary from 1005a2-5: "This is why it is not up to the geometer to study the question what is contrariety, or completeness, or oneness, or beingness, or sameness, or otherness, but only to precisely study them, proceeding from the assumption of them", leaving, that is, the τί ἐστι questions to the philosopher. Next follows the general conclusion of the chapter firmly stating (1005a13-18) the definite answer to the fifth aporia of Book B (1, 995b18-27; 2, 997a25-34), to the effect that

<sup>94</sup> In the twelfth century a similar semantic problem — concerning the river Seine ('Secana') — was discussed in the Parisian milieu by logicians who were definitely not familiar with Aristotle's *Politica*. See e.g. the extensive discussion of the question of whether names of rivers and cities are proper or appellative names which is found in the anonymous *Ars Meliduna* (12th cent.) III, chs. 10-11 in De Rijk (1967), 323-5. For similar scruples concerning the individuality of rivers, cities, and clouds, see Kahn (1971), 49, n. 19.

“Obviously it is the task of one discipline to study that which *is* qua thing-that-is, and the attributes which fall to it qua thing-that-is; and the same discipline will examine not only the substrates but also the attributes, both the aforesaid ones, as well as priority and posteriority, genus and species, whole and part, and the others of this sort”.

### 7. 5 *The axioms LNC and LEM codified*

The third chapter divides into two main parts, 1005a19-b8 and 1005b8-34. The first, which continues the discussion about the status and scope of metaphysics, answers the second aporia raised at B 1, 995b6-10 and 2, 996b26-33. The second deals with the two laws governing any discussion and disputation, including the investigations about true Being, viz. the law of non-contradiction (LNC) and the law of excluded middle (LEM).

The philosopher, Aristotle argues (Γ 3, 1005a19-b2), should also examine what in mathematics is termed ‘postulates’ (ἀξιιώματα) with respect to ousia, because ontic postulates hold of every thing-that-is and not merely of some special class apart from the others. Indeed they are universal, because they concern that which *is* qua thing-that-is, and the members of each class are all a ‘thing-that-is’. This is why to study these is the philosopher’s task, and none of the specialists endeavour to say anything about their credentials, except perhaps some of the physicists who claim that they alone investigate the whole of nature, and in doing so, that which *is* in general. However, since ‘nature’ is only one particular realm of things-there-are,<sup>95</sup> to examine the axioms is also up to the person whose job it is to inquire what is universal and primary ousia (1005a36: τὴν πρώτην οὐσίαν)<sup>96</sup>, in line with what is said at *Met.* α 3, 995a12-14.

### 7. 51 *The logico-ontological nature of LNC and LEM*

The main line of argument is to establish the intrinsic relationship between axioms and the ontic structure of things-that-are, which

<sup>95</sup> Taking φύσις with e.g. *Phys.* II 1, 192b 21 (cf. *Met.* Δ 4, 1015a13-15) as “the ‘permanent nature’ as opposed to γένεσις” (Ross I, 297), not with e.g. *Met.* Z 6, 1031a30 (cf. *Met.* Δ 4, 1015a11-13) as an equivalent of οὐσία, in which case it frequently occurs juxtaposed to the latter.

<sup>96</sup> For this key term see my *Index s.v.*

springs from the fact that, in the final analysis, the ontic structure of things as well as any epistemonical proof (ἀπόδειξις) of that structure are governed by these ‘prerequisites’. Aristotle clearly indicates that he takes the term ἀξίωμα from mathematics. Ross suggests (*ad loc.*) that elsewhere Aristotle reckons the principle that ‘if equals be taken from equals equals remain’ is included among the κοινὰ ἀρχαί or κοινά, i.e. the postulates Aristotle has in mind here, and that in fact he is about to confine himself now to dealing with only LNC and LEM. However, from the parallel passage found in K 4, 1061b17-33, it is plain that the author is quite consistent in taking such specialistic principles common to merely one (cluster of) discipline(s) — e.g. the one(s) dealing with things qua quantities, or qua changeable — as falling under the κοινά, which are themselves governed by LNC and LEM, because the specialistic principles are merely considered κοινά in a special application:

*Met.* K 4, 1061b17-27: Since even the mathematician uses the common principles in a special application, it must be the task of first philosophy to examine their principles too. That if equals are taken from equals the remainders are equal, is common to all quantities, but mathematics carries out an investigation concerning a part of their [viz. the quantities’] proper material conditions, which it has isolated, e.g. lines or angles or numbers or something of the other kinds of quantitative beings, but not qua things-that-are, but inasmuch as each of them is continuous in one or two or three dimensions. But philosophy does not examine particular objects inasmuch as each of them has some attribute or other, but studies that which is, inasmuch as each of them is.

A similar observation is made, then, about physics and physical attributes (1061b27-33).<sup>97</sup>

Next Aristotle warns us (1005b2-8) that a lack of training in analytics is bound to jeopardize the attempts of people who try to investigate reality, i.e. how it should be understood; for one should be well equipped with the appropriate skills to undertake this enquiry, and not try to find it while listening to the lectures. Clearly, then, — he continues— it is up to the philosopher, who studies the nature of all ousia, to also inquire into the principles of deductive

<sup>97</sup> The term ἀξίωμα is often used by Aristotle rather loosely. See Einarson (1936), 43-6, and Barnes (1975), 102-4. In the Middle Ages there is a threefold division of principles into ‘principia communia, communiora, communissima’, the last ones being LNC and LEM. See e.g. Girald Odonis, *Logica*, part III, *De duobus principiis communissimis*, pp. 327-9 ed. De Rijk (1997).

reasoning; for<sup>98</sup> it is appropriate for him who has the best understanding about some class of things to be able to state the firmest principles of the subject matter in question — and this is so concerning any class<sup>99</sup> — and, consequently, this also obtains for him who has the best understanding about such a universal subject matter as ‘the things that *are* qua things-that-*are*’. And, this person is the philosopher.

Quite naturally, in the foregoing lines the training in logic was specified as that in analytics and deductive reasoning. In fact, Aristotle is referring his audience to the two tracts entitled *Prior* and *Posterior Analytics*, in which the techniques of correctly framing syllogisms (or deductions) are explained, and the role of the syllogistic ‘middle’ in acquiring epistemonik knowledge, respectively. It is precisely these two things that are indispensable for the person who, as first philosopher, tries to discover the true nature of the things that *are* by focussing on their being qua things-that-*are*, because this procedure requires us to analyse the particular beings and to search for their causes and principles, and to make them the pivot of the epistemonik deduction.

#### 7. 52 *The framing of the two firmest principles*

Having made these observations in order to answer the second aporia raised in Book B (1, 995b7-9; 2, 996b27ff.), the author has sufficiently prepared his audience for his discussion of the two absolutely common principles that govern both anything that *is* and any disputation about it.<sup>100</sup> This is where the second main part of the chapter begins, in which Aristotle proceeds to state these principles, taking his starting-point from the requirement that they should be the firmest of all. So he first enumerates three characteristics to be met by a principle which claims to be the firmest of all: (a) it is impossible to be mistaken about it; (b) it necessarily is the most intelligible; and (c) it is non-hypothetical and must be part of the equipment the investigator comes with as an unshakeable attainment,

<sup>98</sup> Taking at b8 the connective *δέ* explicatively.

<sup>99</sup> As often in Greek (and Latin), *ἕκαστος* (‘quisque’) is dominantly used, as in ‘each citizen will be punished if the law has been offended’, meaning ‘for each citizen it holds that if ... etc.’.

<sup>100</sup> Thus LNC is even applied at *EN* III 4, 1111b13-16, and LEM at *Phys.* I 8, 191b26.

not a premiss that is not really known but only assumed (ἐξ ὑποθέσεως).<sup>101</sup> Since there is only one principle that meets all these conditions, viz. the law of non-contradiction (LNC)<sup>102</sup> Aristotle goes on to state it and explains why this principle is the one we are looking for:

*Met.* Γ 3, 1005b18-34: Which principle this is, let us proceed to say: it is to the effect that for the same thing to obtain and not to obtain simultaneously of the same thing and in the same respect is impossible — given any further specifications which might be added against dialectical difficulties.<sup>103</sup> This, then, is the firmest of all principles, for it fits the specification stated. Indeed it is impossible for anyone to believe that the same thing is and is not [...]. Well, if it is not possible for contraries to obtain of the same thing simultaneously — given that the customary specifications are added to this statement too —, and the opinion which contradicts another is contrary to it, obviously it is impossible for the same person to believe simultaneously that the same thing is and is not; for anyone if he were mistaken on this point would be holding contrary opinions simultaneously. That is why all those who are carrying out an epistemonical proof reduce it to this as an ultimate conviction: it is, naturally enough, also the starting-point for all the other axioms.

It is commonly held that for Aristotle LNC is primarily an ontic law, governing the ultimate nature of all things that are, and secondarily a law of logic. This is true enough, on the proviso, however, that the two domains, the ontic and the logical one, should not in any way be opposed. In Ancient thought the optimistic, unquestioned and never reflected upon assumption of the parallellism between being and thinking is predominant. To put it otherwise, the philosopher's concern with the *things* that *are*, including the ones that possess actual 'existence', is *eo ipso* ontology, meaning that even the outside world presents itself to the human mind *qua conceived of*, and never never inasmuch as it is in itself — independent of our thinking, that is. It is

<sup>101</sup> Ross *ad loc.* rightly refers for this sense of ἀνυπόθετον to the Platonic sense of the word.

<sup>102</sup> LNC is discussed extensively in 1005b19-1011a2 and is here introduced as the firmest principle (in the singular), because its counterpart LEM, which is paid only little attention to (1011b23-1012a28), forms with LNC as it were a Siamese twin, and in fact does nothing but rephrase LNC for the two-valued system of logic Aristotle adheres to.

<sup>103</sup> Those specifications are meant that should be added to prevent the troublesome inferences usually made by sophists. Cf. Aristotle, *Int.* 6, 17a33-37 and *SE* 5, 167a23-27, and Plato's merely ontological formula in *Rep.* IV, 436B8-9: "Obviously, the same thing will never do or suffer opposites simultaneously, at least in the same respect and relative to the same thing".

the parallelism postulate in Ancient thought that prevents any form of radical subjectivism, and any kind of ‘Bewusstseinsphilosophie’ as well. The same philosophical attitude comes to the fore in Aristotle’s argument that it is impossible for anyone to believe LNC to be invalid.<sup>104</sup>

What should we understand by ‘the same thing’ (τὸ αὐτό, 1005b19), of which it is said that it does not obtain and not-obtain simultaneously? This notion is rephrased at b27-28 in terms of ‘contrary, or contradictory things’, and explained in similar terms at the end of the sixth chapter (1011b15-22). In the next few chapters it will become clear that neither contrary nor contradictory statements (‘assertions’) are meant, but ‘states of affairs’ (‘dictums’ or ‘statables’ or ‘*that*-clauses’) of this kind — in fact, more-than-one-word expressions which can be assigned to things to describe their actual or possible states.

### 7. 6 *The truth of LNC vindicated elenctically*

Chapter four presents eight proofs in defence of LNC, which are introduced by an assessment of their practical force. The author recognizes that the validity of LNC cannot be strictly proved, but can only be made plausible by showing the hopeless embarrassments anyone denying LNC will unavoidably get into.

Kirwan (90-2) seems to think that the introduction (Γ 3, 1005b35-1006a28) is rather unclear: he believes that at 1006a11-12 it is suggested that the preceding has shown that demonstration of LNC is *impossible*, unless “in the manner of refutation” — a view that is confirmed by the author of K 5, 1062a2-4 — whereas in the present lines, as well as in the remainder of this paragraph, we are told that “a demonstration ought not to be sought”, which may convey that demonstration of LNC is merely *needless*. I cannot see the problem. For if something is said to be impossible, the search for it may be held to be needless and superfluous; Kirwan’s “merely” (90) is not found in the Greek text, for that matter.

In the introductory part of this chapter, Aristotle attempts to settle scores with people who not only themselves assert that it *is* possible for the same thing to be and not to be at the same time, but, in

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<sup>104</sup> This claim was explicitly challenged by some people, quite apart from the validity of LNC; see the opening lines of chapter 4 (1006a1-2).



addition, contrary to what Aristotle says at 1005b29-30, claim that it is quite possible to take up this position.<sup>105</sup> Aristotle's ripostes (1006a3-5) maintain that "we [meaning himself and his audience] have now [viz. after what has been said at 1005b22-32], a firm grasp<sup>106</sup> of the impossibility of something being *and* not being, simultaneously, and have *eo ipso* succeeded in making clear<sup>107</sup> that this really is the firmest of all principles".

Next Aristotle (1006a5-11) proceeds to answer some people who keep upholding the denial of LNC as well as the possibility of really believing that not-LNC, and even go as far as to demand the adherents of LNC to bring forward a proof for the LNC postulate itself (καὶ τοῦτο, a5). He charges them with a lack of logical training; for it shows a lack of training not to recognize of what things demonstration ought to be sought, and of what not. It is impossible anyway that there should be demonstration of all things and everything, since the process would go on to infinity, with the result that there would be no genuine proof at all. If, on the other hand, they too were to agree that, in some cases at least, demonstration should not be demanded, they would prove not to be themselves capable of saying which principle *they* regard as meeting the aforesaid requirements for being qualified as an absolute, indemonstrable axiom, to a higher degree indeed than LNC is.

In the second part of the introduction (1006a11-27), Aristotle claims that it can be shown that the opponents' view — that it is possible for the same thing to be and not to be simultaneously — is untenable, not, of course, by way of an epistemonical proof, but ἐλεγκτικῶς; that is to say, on one condition: if only our opponent is saying something. At a15-27 the author himself makes clear what precisely, in the present context, is meant by ἐλεγκτικῶς, and what should be understood by the requirement that the opponent should 'say something':<sup>108</sup>

<sup>105</sup> Note the use of the same verb ὑπολαμβάνειν at 1005b30 and 1006a1, which is frequently used in Greek for assuming an ill-grounded opinion (see Liddell & Scott s.v. III).

<sup>106</sup> Note the perfect tense εἰλήφαμεν (1006a3), and the phrase ὥς ἀδυνάτου ὄντος, in which the use of ὥς with participle indicates that they have this conviction as their own ('subjectively'); Kühner-Gerth II, 91.

<sup>107</sup> The phrase διὰ τούτου (1006a4) refers to 'us having this firm belief' (hence my rendering '*eo ipso*'); and the resultative aorist ἐδείξαμεν indicates that the author views his action as something more than just an attempt.

<sup>108</sup> Ross's paraphrase of 1006a11-27 (1948 I, 264) is beside Aristotle's point, and the many problems Kirwan (90-2) raises and discusses concerning what he deems

*Ibid.* 3, 1006a11-15: Even this can be proved to be impossible elenctically, if only the disputant says something meaningful (ἂν μόνον τι λέγῃ). If he does not, it is ridiculous to look for an argument (λόγον) against one who has himself no reasonable utterance (λόγον), precisely because he has not; such a person, you can say at once (ἤδη), is as such similar to a vegetable.

Notice Aristotle's vivid manner of expression. His playing on the double sense of λόγος is noticeable in the first place ('argument' and 'reasonable utterance'). Then, the spiteful comparison of the opponent with a senseless vegetable is given stress by the adverb ἤδη, indicating that the statement is so obvious as to make further reflection superfluous.<sup>109</sup> Subsequently, Aristotle explains the force of an elenctical disproof:

*Ibid.* 3, 1006a15-27: By 'proving elenctically' I mean something different from epistemoni proof, because he who attempts to strictly demonstrate might appear to be begging the initial issue, but if another person [viz. from the demonstrator] is the begger of such an initial issue, there is room for an 'elenchos', not an epistemoni proof. In view of all such cases, then,<sup>110</sup> the initial step is, not the demand that our opponent should state something *either* to be *or* not to be — for that might well be believed to be a begging of the initial issue — but at least to say something that is meaningful both to himself and to somebody else; for this is compulsory if he is to say anything. For if he does not <say something>, there will be no discussion with such a person, either in response to himself or to anybody else. But if somebody does proffer this [i.e. a meaningful expression], a proof will be possible, for something, then, will already be definite. But, then, the begger of the initial issue<sup>111</sup> is not he who presents the proof but the one who tries to maintain <his own position>, for in that he tries to destroy the opposite argument he is in fact maintaining it. Moreover, anyone who once<sup>112</sup> made such an admission is one who admits the view that something is true independently of demonstration.

Admittedly, this passage does not help us very much to assess the precise meanings the word ἔλεγχος and its cognate ἐλεγκτικῶς have

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to be a "cryptic paragraph" do not hit the mark either.

<sup>109</sup> Cf. Theophrast, *De igne*, ch. 6: "With this starting-point, a coherent account of the generation and destruction of fire is given at once".

<sup>110</sup> Taking δέ in the sense of δὴ (Denniston, 170).

<sup>111</sup> The common translations ('the cause', or 'the one responsible for the proof', Kirwan, Ross and Tredennick, respectively) ignore the etymological allusion in αἴτιος to the verb αἰτεῖσθαι. Kirwan (92) asks on the occurrence of αἴτιος at 1006a25: "cause of what?", and gives two unsatisfactory answers.

<sup>112</sup> Alexander aptly paraphrases (CAG I, p. 275<sup>6</sup>) this with τὸν ἅπαξ συγχωρήσαντα τοῦτο.

in this context, and is not very conducive to our understanding of the function of the elenctical arguments found in the remaining part of the chapter. What can be gathered from Aristotle's words is that ἔλεγχος still has something of its original meaning 'reproach', or 'exposure of something's bad or weak spot'. So to prove something elenctically appears to mean 'to disprove the opposite thesis by exposing in which (basic) respect its defense is inevitably self-destructive'. The renderings 'in the manner of refutation' (Kirwan) and 'negatively' (Ross) are not entirely to the point, because Aristotle does not have a proper refutation or 'negative argument' in mind, since such arguments would aim at displaying the falsity of the opponent's thesis itself. The kind of disproof Aristotle is referring to is to show that the adherent of the view under attack will become guilty of inconsistent behaviour, once he has proffered a meaningful expression in a discussion about the issue at stake, and undertakes to seriously maintain it. Quite understandably, the author of the parallel passage in K 5, who does not use the word ἐλεγκτικῶς, paraphrases it (1062a2-3) by saying "About such matters no epistemonik proof in the unqualified sense is possible, but there is a proof directed to the person (πρὸς τόνδε)".<sup>113</sup> Such an elenctical argument, then, does not have the strong illational force of an argument *ex absurdo*, which serves to prove that the opponent's position is untenable because it leads to an absurd conclusion. Simply, an elenctical argument aims to refute the opponent out of his own mouth.<sup>114</sup>

Unlike Bonitz (who is followed by Tricot), Ross and Kirwan were confused about the purport of the passage. Most commentators, it seems, fail to recognize and take profit from the invaluable clues it

<sup>113</sup> This proof is an 'argumentum ad hominem' in the Lockean sense, being an argument based upon what the opponent has falsely assumed ('ex falso concessis'). Annas is right (1979, 28) that in his elenctical arguments against Plato in *Met.* M and N (esp. M 2, 1077a15-20; 4, 1079a19-b3 and b3-11; N 2, 1089a7-14), Aristotle cleverly associates the notions of contradiction and reduction to absurdity. Generally speaking, Aristotle considers difficulties brought against one view to be usable as proofs for the opposite view. Cleary (1995), 288 (to *Car.* I 10, 279b6-7).

<sup>114</sup> The adherent to the anti-LNC and anti-LEM theses precisely ignores the law of absurdity, '(If *p*, then [*q* and *Nq*]), then *Np*'. Note that at *Met.* M 2, also, the argument is elenctic; cf. Cleary (1995), 280, n. 38. Incidentally, Alan Code is of the opinion (1988, 179f.) that the meta-elenctic argument (being the reflection on the elenctic argument) is designed to show that the mere possibility of significant thought and discourse requires adherence to LNC and is, as such, an independent argument for the claim that everybody must believe the validity of LNC. I would rather say that, qua elenctic, it merely intends to make clear that the denial of LNC unavoidably leads to unsurmountable difficulties and embarrassment, and therefore suggests that one had better join the adherents of LNC.

contains for our comprehension of the elenctical arguments to be presented in the remainder of this chapter. First, the requirement of ‘saying something’ is paralleled by the phrase ‘to signify one thing’ in the second argument (1006a31ff.). The explanation of this requirement at 1006a13-15 is to the effect that it is ridiculous to present a λόγος to one who gives no λόγος at all himself, because he does not express a meaningful term. When in his explanation of the crucial term ἐλεγκτικῶς, Aristotle speaks of the demand that the opponent should say ‘something meaningful’, he does not mean something of importance,<sup>115</sup> but ‘something significative’, thus ruling out non-significative words. If the man is not ‘saying something’ he is similar to a vegetable, Aristotle sneers, which is likewise only able to produce meaningless sounds. The restrictive addition “inasmuch as he is doing this” is not meant to temper the bold comparison, but should be taken to indicate that the person falls under Aristotle’s verdict precisely because<sup>116</sup> his utterance contains a meaningless word. Further, in his assertion that there always will be ‘something definite’ (ὀρισμένον, 1006a25) if the opponent does ‘say something’, Aristotle is alluding to the semantic definiteness of a meaningful term, say ‘man’, which rules out the meaning of its opposite (‘not-man’), and, in doing so, undermines the ‘both-yes-and-no’ scheme, which is typical of the opponent’s thesis rejecting LNC’s ‘either-yes-or-no’.

### 7. 7 *The eight arguments in favour of LNC*

Several elenctical arguments are now adduced to show what Aristotle claims about the opponents to LNC. So far, no interpreter has had any doubts about the number of arguments, but opinions differ as regards their identification. Some (Ross, Tredennick, Tricot) run 1006a28-1007b18 together as the first, but take 1008a2-7 as a separate argument (the third); Kirwan, on the other hand, lets the second argument begin as early as at 1006a31, but combines 1008a2-7 with the foregoing lines (1007b18-1008a2), and so takes it as the rounding up of the third argument, while the others regard it as the fourth.

<sup>115</sup> The phrases λέγειν τι and εἶναι τις usually mean ‘to say something important’, ‘to be an important person’.

<sup>116</sup> The *qua*-functor (ἥ) frequently has the connotation of ‘precisely because’, particularly in the proofs based upon focalization and categorization.

The logical analysis of the arguments seems to be in favour of Kirwan's separating 1006a28ff. from the foregoing lines. However, the other interpreters' identification of 1008a2-7 as a separate argument seems to be well considered, too. Either way the number of the arguments is eight.

Leaving aside for the time being the difficulties of articulating the arguments, there are a number of factors to be considered when it comes to evaluating their strength. The arguments are dissimilar in conclusiveness, and more than once we see an argument drawing on the same or cognate issues. Two pivotal notions should be highlighted in discussing and weighing them, to wit their playing on 'semantic definiteness' and their cracking of the 'both-and' device of the opponent's thesis.

#### 7. 71 *First argument (1006a28-31)*

The first argument is quite pregnant and has been given various interpretations, most of which seem to get hold of the wrong end of the stick, by taking the word ὄνομα at a30 as referring to some name chosen by the opponent (e.g. 'man' or 'tree').<sup>117</sup> This word is instead used, I take it, to designate the subsequent formula, which is in fact the dictum taken from LNC, by stripping the modal operator ("it-is-impossible"). Ross, in his paraphrase following (I, 265) Alexander's alternative interpretation, rightly takes ὄνομα this way, but both he and Alexander wrongly split up the disjunctive expression and read "the ὄνομα 'to-be', or (viz. the ὄνομα) 'not-to-be'", which does not give an appropriate sense. I propose to take the disjunction as one formula indicated by the word ὄνομα, and to read the argument as follows:

*Mel.* Γ 4, 1006a28-31: First, then, it is clear that this at least is absolutely [αὐτό = 'by itself'] true, that the expression 'to-be-or-not-to-

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<sup>117</sup> So the interpretations (1)-(4) mentioned, and rightly deemed wanting by Kirwan (93), including Alexander's first interpretation (CAG I, p. 275<sup>2</sup>), which is (4) in Kirwan's list, and which holds that it is all about a name's natural significative function, from which it is inferred that at least one predicate, 'being-significative', is beyond the range of the opponent's thesis that what is significative is simultaneously not-significative. Whitaker (1996, 189-93) in fact follows Kirwan's interpretation of the sentence (193: "These lines [...] give us a very compressed argument to the effect that nothing which can be referred to in words is both so and not so". However, on this interpretation, Aristotle's argument is really "unconvincing" (Kirwan, 93), if not begging the question.

be' signifies something definite (τοδί), so that it could not be that everything is *both* so-and-so *and* not so-and-so.

On this reading, the argument aims to show that he who, like the opponent of LNC, explicitly rejects its definite 'either-yes-or-no' dictum must acknowledge that at least this dictum cannot be regarded as an instance of 'yes-and-no-simultaneously', because, if otherwise, the opponent would have no reason to reject LNC. The argument's point is that it lays the opponent's 'both-and' device concerning being and not being on the table. The notion of definiteness is of paramount importance in this respect, since to Aristotle's mind, the 'both-yes-and-no' strategem implies vagueness. The counter-strategy Aristotle is carrying out throughout the seven elenctical arguments against the opponent's disputational attitude continuously revolves around the notion of definiteness as jeopardizing the 'both-yes-and-no' device.

The merely elenctical nature of the first argument is evident, and so is Aristotle's requirement that the opponent should at least 'say something'. The argument does not conclusively prove the validity of LNC, but merely embarrasses the adherer to the opposite thesis, 'Not-LNC', without strictly falsifying the man's thesis itself. As a matter of fact, as long as he is not 'saying-something', our opponent can still keep *thinking* "I couldn't care less about the truth of LNC, because it is *also* false, and that's what counts".

A final remark about Aristotle's use of ὅνομα at a30. Usually, this word stands for a one-word-expression, but it can also be used to indicate a more-than-one-word expression designating one undivided state of affairs, such as the disjunctive entity, 'something-to-be-or-not-to-be' as opposed to the copulative entity 'something-to-be-and-not-to-be-simultaneously'. The only condition such a unified state of affairs has to meet is that, in Aristotle's words (1006b1-2, in the next argument), it is a formula (λόγος, or more-than-one-word-expression) that a name can be assigned to.<sup>118</sup>

#### 7.72 *Second argument.* (1006a31-1007b18). *'To signify one thing'*

The second argument focusses on 'signifying-one-thing', and thus aims to specify the previous requirement of 'saying-something' (1006a13). The main line of this argument is to prove that (a)

<sup>118</sup> For ὅνομα see my section 3.25.

(1006a31-b11) in using an ὄνομα you are always saying something one and definite, and (b) (1006b13-25) the opponents of LNC must concede that any saying of something definite is inevitably subject to LNC, on pain of frustrating any kind of discussion, including their own inner dialogue about the anti-LNC thesis. In the course of the argument several hints are given by Aristotle for the reader's correct understanding of the important semantic device ἐν σημαίνειν. In the first stage of the argument this device is operationally defined:

*Met.* Γ 4, 1006a32-34: What I understand by 'signifying something one' is this: if that <viz. two-footed animal> is man, then if man is something, that [viz. two-footed animal] will be 'being-a-man'.

The crux lies in the explanatory conditional sentence (1006a33) ἂν ἢ τι ἄνθρωπος, which is commonly rendered 'if anything is a man'.<sup>119</sup> But Aristotle is trying to make clear that if someone engaged in a dispute (for example, his opponent) by saying 'man' signifies something one (and thus satisfies the previous condition of 'saying something') and, by the same token (1006a30) 'something definite' (τοδί), then the account 'two-footed animal' will also be something one and definite.

In the next lines (1006a34-b11), Aristotle goes on to explain what unity of expression comes down to. This explanation contains a clear hint for understanding the meaning of 'signifying one thing'. It does not matter, he says, if we were to assign more than one-thing-signified (i.e. a plurality of 'entities') to e.g. 'man', provided that these different 'things' are all definite, and of a definite number;<sup>120</sup> for in that case they each could be given their distinct name, one of which is, for instance, the-one-thing-signified (or 'quidditative unit') that was instanced before, viz. 'two-footed animal'. Indeed, if one were to say that 'man' has an infinite number of meanings,<sup>121</sup> obviously any discussion would be impossible:

*Ibid.* 3, 1006a34-b11: It even makes no difference, though, if someone were to assert that it [viz. 'man'] signifies more than one thing, provided these were definite; for <in that case> a different name could be assigned to each account. I mean this: if, for instance, someone were to assert that 'man' signifies not one but several things, among which

<sup>119</sup> E.g. Maier (1896), 48; Ross I, 269 (*ad loc.*); Kirwan (1971), 9; Code (1988), 180.

<sup>120</sup> E.g. 'living thing', 'body'.

<sup>121</sup> Supply something like: "so that you are not capable of counting and listing them completely, and assigning them one by one a distinct name in order to make each of them a definite unity".

features the account ‘two-footed animal’, but not this alone, albeit a definite number — <even then there would be no problem>, for a proper name could be assigned with reference to each of these accounts [since they are definite, and definite in number]. But if, instead, he were to assert that it [viz. ‘man’] signifies infinitely many things it is obvious that there would be no discussion at all. For to signify something not-one (τὸ γὰρ μὴ ἓν σημαίνειν) comes to signifying nothing, and if names are meaningless, any discussion with others is eliminated, and, in truth, even that with oneself, since nothing can be conceived of unless one is conceiving it as one thing. If, on the other hand, it *were* possible, then one name could be assigned to the conceived thing<sup>122</sup> [supply: and then we will be back again to our initial position that there is always talk of ‘something one and definite’].

In this context, the phrase ‘to signify something not-one’ should be understood as to signify indefinitely many things, which, as has been argued for in the preceding lines, cannot possibly be reduced to a definite number of quidditative units each of which is pairable with names signifying some one thing. If (indefinitely many) names were assignable to infinitely many things, those names would have an infinitely vague meaning. This would really frustrate any dialogue, “even, in truth, that with oneself”, Aristotle adds, so that the requirement of ‘saying something’ seems to hold even for our opponent’s inner dialogue, which, similarly, requires conceiving of one’s object as ‘one definite thing’.

Now Aristotle (1006b11-13) feels entitled to wind up this first stage of the argument (which happily contains another clue for grasping what precisely he means by ‘to signify some one thing’), thus arriving at the appropriate premiss for the argument proper: “Well, let the name, as was said initially — viz. the unifying (distinct) names that designate conceivable and signifiable units pairable with names and discussed in the preceding lines (at b2,5,8,11) — signify something and signify some one thing”.

The second stage of the argument contains two more clues<sup>123</sup> concerning the precise meaning of ‘to signify one thing’:

*Ibid.* 4, 1006b13-25: This being stated, it is not possible that ‘to-be-a-man’ (τὸ ἀνθρώπων εἶναι) should signify precisely not-to-be-a-man (ἀνθρώπων μὴ εἶναι), assuming that ‘man’ not only says something

<sup>122</sup> Note the peculiar position of the word ἓν: the attribute ἓν added emphatically (at the end of the sentence) to the subject term ὄνομα may suggest a rendering like ‘a name conveying oneness’.

<sup>123</sup> The fourth and fifth clues will be given at 1007a14-15 and a26-28.



about<sup>124</sup> an object that is one thing (καθ' ἐνός), but also signifies <it as> one thing (ἓν).<sup>125</sup> — Incidentally, you should know that<sup>126</sup> we do not identify 'to signify one thing' (τὸ ἐν σημαίνειν) with 'to signify something about a subject that is one' (τὸ καθ' ἐνός), since on *that* assumption, also 'educated' and 'pale'<sup>127</sup> and 'man' would signify one thing, meaning that all of them taken together would be one thing, synonymous<sup>128</sup> as they are; and in that case there will not be an instance of 'to-be-and-not-to-be-the-same-thing<simultaneously>', unless homonymously, which could be compared to the case in which other people might call the person we call 'man,' 'not-man'. But what is really perplexing is not whether it is possible that the same thing should simultaneously be and not be a man in name, but as a thing. On the assumption, however, that the expressions 'man' and 'not-man' mean nothing different, clearly 'not to be a man' will mean nothing different from 'to be a man' either, so that 'to be a man' will be 'to be a not-man'; for they will be one thing. For 'to be one thing' signifies this: being like 'mantle' and 'cloak' are, if the definiens is one.

In these lines, Aristotle first elucidates what it is precisely 'to signify one thing', by contradistinguishing it to its counterpart, viz. 'to signify not one quidditative unit, but a coincidental one, made up by, say, 'educated', 'pale' and 'man' actually coming together in one particular human being, e.g. the pale, educated man, Socrates. For in that case you may assert that the three entities, being-educated, being-pale, and being-man, are 'one thing', viz. Socrates, since they all refer to one thing synonymously, meaning that qua actually referring to (referentially) one and the same thing, viz. educated-pale-man-Socrates, they may be said "to have both name and definiens in common" (*Cat.* 1, 1a6-7). And if our opponent were to triumphantly retaliate: "Well, there you have a nice instance of 'to both be *and* not be the same thing simultaneously', for 'educated' and

<sup>124</sup> For this use of κατά = 'on account of' to indicate the object as a whole, where it is contrasted to one of its aspects or properties, indicated by a plain object's accusative, see my discussion of Plato, *Sophist*, 262E4-263A10 in De Rijk (1986), 202-6, and below, 54-60.

<sup>125</sup> Viz. the one thing 'two-footed animal' about the one subject 'man', as was indicated at 1006a31ff.

<sup>126</sup> The conjunction γάρ is often used elliptically, meaning something like "<If you were to ask why or how, you should know that> ...". Cf. Liddell & Scott *s.v.* I, 3.

<sup>127</sup> The phrase λευκὸς ἄνθρωπος indicates a pale man as opposed to a dark one, not a white man against a negro, as appears from *Met.* H 5, 1044b25, where a pale man is said to come from a dark man. In other contexts the adjective can mean 'white', as for instance at *Met.* Z 4, 1029b17-18: "[...] being a surface is not being white".

<sup>128</sup> I.e. referring to one and the same thing, 'educated pale man' said of e.g. Socrates.

'pale' are *also* [formally, that is] *not* the same as 'man'!", Aristotle can rebut by saying that this may well be taken as an instance supporting the thesis argued for by the opponent ('Not-LNC'), *but only* if the things under consideration, viz. being-man, being-educated, and being-pale, are taken as homonyms, being, that is, of the same name<sup>129</sup>, 'Socrates', but with different definientia, viz. those explaining 'educatedness' and 'paleness', which both are different from 'manhood', and thus equal 'not-man'.

So there is no problem at all in our calling one and the same thing, say, Socrates, by different names,<sup>130</sup> at one time 'man', at another 'the pale <thing>',<sup>131</sup> at still another '\*the educated'. What would be really baffling, however, is not our using different *names* (e.g. 'educated', 'pale', 'man') for one and the same thing, but that this use should imply the real difference of their referents, so that Socrates would be simultaneously man *and* not-man, because 'being-educated' and 'being-pale' are formally 'not-being-a-man'. But, if 'man' and 'not-man' (of course, sticking to the above case, 'not-man' as referentially or extensionally equivalent to 'the educated' or 'the pale') do mean, i.e. refer to the same thing (Socrates), by the same token the difference between 'not-to-be-a-man' and 'to-be-a-man' is nullified, since both refer to Socrates, the former designating *his* educatedness or paleness, the latter *his* manhood. And, then, they will all three be 'one thing'.<sup>132</sup>

The passage winds up with a fourth clue about the notion 'to signify one thing', this time by paraphrasing the cognate phrase 'to *be* one thing': 'to be one thing' comes to having the same definiens, so that 'to signify one thing' comes to signifying something that is definitorially one. Thus the fourth clue confirms what we have already stated, viz. that the 'something one' under discussion is the

<sup>129</sup> On this interpretation, the word συνώνυμος has its usual sense; and are we not compelled, with Alexander (CAG I, p. 280<sup>19</sup>), followed by Ross, *ad loc.* (against Bonitz, *ad loc.*), to assume that the word is here used in the sense of πολώνυμος ('having one definition, but different names'). Alexander and Ross apparently take this term to refer to the respective names of the trio 'being educated', 'being pale', and 'being man', which, while all referring to Socrates, have the same definiens, 'two-footed animal'.

<sup>130</sup> Thus Aristotle fully agrees with Plato's rejoinder (*Sophist*, 251A-D; see De Rijk 1986, 113-22) to the 'Late Learners', who confused a thing possessing a plurality of attributes with its being more than one thing.

<sup>131</sup> For the indispensability of "tiresome make-weights" in English see my *Index s.vv.* 'substantivation' and 'thing'.

<sup>132</sup> The distinction between 'quidditative' and 'coincidental' units will turn out to be of paramount importance for Aristotle's search for 'true ousia',

quidditatively one, such as ‘two-footed animal, not the coincidentally one, like ‘pale-man’.

So the fatal error committed by the opponent of LNC comes into the picture, viz. his blurring up ‘to signify *about* some one thing’ and ‘to merely signify some one thing’. The distinction is of paramount importance, as clearly appears from the subsequent lines:

*Ibid.* 4, 1006b27-28: But if they [i.e., ‘to be a man’ and ‘to be a not-man’] will be one, the quiddity, ‘to-be-a-man-and-not-man’<sup>133</sup> will signify one thing. But it was shown earlier that they signify something different.

This ‘earlier’ refers to the lines 1006b11-15, in which it was made clear that it is impossible that ‘to-be-a-man’ should signify *precisely the same* (ὅπερ) as ‘not-to-be-a-man’, unless you ignore the important distinction between ‘to signify some one thing’ and ‘to merely (μόνον) signify <something> *about* something one’. Both Ross and Kirwan seem to miss the point of Aristotle’s argument, by ignoring the *unless* restriction. Ross (I, 269) takes the argument of b22-28 to come near to reasoning in a circle. Kirwan (96) takes ‘to merely signify about’ to mean ‘to be truly predicated of’, and thinks that Aristotle’s motive for introducing this distinction is hard to see.

However, in order to see Aristotle’s motive it is of great help to recall Plato’s discussion (*Sophist*, 262E4-263A10) about the nature of ‘statement’, in which the opposition between *περὶ οὗ* and *ὅτου* is momentous. In that portion of the extensive discussion about the nature of *λόγος*, Plato’s mouthpiece brings up an important item — not surprisingly by announcing it (as he often does) as “another small point”. At 263A4 the Eleatic Stranger asks his interlocutor, Theaetetus, on account of the sentence ‘Theaetetus is seated’, to tell him “*of* what and *concerning* whom” it is. The sentences involved (“Now, it is your job to say *what* it is *about* and *whom* it *concerns*.” — “Clearly it is *about me* and *concerns me*.”) are commonly taken as pleonastic. They are definitely not. On closer inspection,<sup>134</sup> it appears that the blank genitive refers to the referent taken by itself, say, the referent’s substance as designated by the onoma representing the subject, whereas the ‘concerning’ formula designates its *praxeis*

<sup>133</sup> The phrase ‘not-man’ covers both ‘not-being-a-man’ and ‘being-a-not-man’. For the irrelevance (in the present context) of the semantic difference between the two see *Met.* Γ 4, 1007a24; its pertinence is in order in *Int.* 10, 19b19-30 and *APr.* I 46, 51b36-52a14.

<sup>134</sup> For this passage see De Rijk (1986), 202-6.

(‘doings’) or appurtenances (‘what befalls to somebody’; *German*: ‘Widerfahrnisse’) designated by the attributive term here occurring in predicate position. Of course, the referent of τίς in the τίνοϛ formula is identical with the one of the περὶ τίνοϛ formula (viz. Theaetetus), but the former formula takes him as a suppositum — or ὑποκείμενον, using the Aristotelian label — the latter as a suppositum including its appurtenances.

While Plato uses the distinction between τίνοϛ and περὶ τίνοϛ in order to solve the problems around ψεῦδος, Aristotle adduces the parallel distinction between τι (τὸ ἓν) and κατὰ τινός (καθ’ ἑνός) to counter the opponent’s erroneous view about the identification of the expressions ‘to signify one thing’ and ‘to signify about one thing’. To be more precise, to assert that an attribute falls to some ‘one thing’ (‘quidditative unit’, that is) does not imply the *quidditative* oneness of the ‘one thing *plus* attribute’ composite, or ὑποκείμενον *including* its appurtenances. Using the example under discussion, to attribute ‘being educated’ and ‘being pale’ to the quidditatively one ‘man’, Socrates, does not bestow quidditative oneness upon the combination ‘educated-pale-man’; it still remains a coincidental unit.

Given the opponent’s erroneous presentation, Aristotle’s next move to lay the ‘*both-yes-and-no*’ device (1006b28-34) on the table is inescapable for the opponent. The author first takes up the line of argument he started at b13-15 — which was interrupted by the digression about the precise meaning of ‘to signify one’ —, saying “It is not possible that ‘to be a man’ should signify precisely ‘not to be a man’”:

*Ibid.* 4, 1006b28-34: It is accordingly necessary, if it is true to say of some thing that it is a man, that it should be a two-footed animal (for that is, we stated [at1006a31-32], what ‘man’ signifies). And if this is necessary it is not possible that the same thing should not be, at that time, a two-footed animal; for ‘to be necessary’ signifies this: to be incapable of not being. Consequently, it is not possible that it should be simultaneously true to say that the same thing is a man *and* is not a man.

The illative force of the argument is questioned intricately by Kirwan (98f.). In my view, the point Aristotle is trying to make is this: if  $[x]$  is truly said to be a man, then it obtains — on the assumption we have made at 1006a31-34 that ‘two-footed animal’ signifies the (quidditatively)-one-thing, man — that  $[x]$  is a two-footed animal, and that  $[x]$  is not simultaneously something that is not a two-footed animal. Hence given the referential convertibility of ‘man’ and ‘two-footed

animal', which obtains at that time (τότε, b31),<sup>135</sup> it is impossible to insist that the same [*x*] is a man and is not a man, simultaneously. The force of the argument, therefore, consists in causing the embarrassment the opponent must have felt, once he was forced to agree that, given the quidditative oneness of the unit 'two-footed animal *plus* man' as assigned to the particular man [*x*] — in whom, consequently, 'man' and 'two-footed animal' are convertible (or 'mutually implicative') — the anti-LNC thesis of *both-yes-and-no* cannot be maintained, in so far as [*x*] is concerned.

But what about the instances concerning coincidental units? one may now ask. This is what Aristotle is going to explain in the next paragraph, in which he claims that the same argument also applies in the case of 'not being a man':

*Ibid.* 3, 1006b34-1007a4: The same argument applies also in the case of not-being-a-man (ἐπὶ τοῦ μὴ εἶναι ἄνθρωπον).<sup>136</sup> For 'to be a man' (τὸ γὰρ ἄνθρωπον εἶναι) and 'to be not a man' (τὸ μὴ ἄνθρωπον εἶναι) signify something different, given that (εἴπερ) also 'to be something pale' (τὸ λευκὸν εἶναι) and 'to be a man' (τὸ ἄνθρωπον εἶναι) are <formally> different. For the former pair contains a much stronger opposition.

To understand Aristotle's position it is vital to see what in this passage (1006b34-1007a20) is meant by the phrase 'to-not-be-a-man'. Kirwan (99) seems to take it for any 'indefinite name' whatsoever as defined in *De int.* 2, 16a29-32<sup>137</sup> and finds it hard to see how the subsequent sentence (1007a1-3) explains Aristotle's claim about the wider range of the previous argument. But it is precisely this sentence — running "For 'to be a man' and 'to be a not-man' signify something different, assuming that to be pale and to be a man are not the same" — that makes clear that Aristotle is not going to speak about any

<sup>135</sup> Kirwan's objection (98) that "not all two-footed animals are men" ignores this restriction.

<sup>136</sup> Ross, who rightly rejects (I, 270) Christ's metathesis ἄνθρωπον εἶναι at 1007a1, has well observed that "though Aristotle recognizes the verbal difference between μὴ εἶναι ἄνθρωπον and μὴ ἄνθρωπον εἶναι [one should read the accusative twice; *De R.*] he evidently treats them as logically equivalent (1007a24, 28, and cf. 1006b25 with 1006b13, 21, 24, 34). When he wishes to compare the relation of the positive to the negative notion with the relation of τὸ λευκὸν εἶναι to τὸ ἄνθρωπον εἶναι he naturally passes (1007a2) to the form τὸ μὴ ἄνθρωπον εἶναι". However, Ross failed to point out that in the present contexts Aristotle has every right to treat these phrases as logically equivalent, this equivalence being extensional or referential, not formal.

<sup>137</sup> For the general notion 'indefinite name', and 'not-man' standing for whatever thing that is not a man see De Rijk (2002) and my sections 3.25-3.26.

signification whatsoever of 'not-man', but more specifically about 'being a not-man' when used as an alternative name for 'being educated' or 'being pale', as was the case in the previous discussion, owing to our opponent blurring 'to signify something one' and 'to signify *about* something one'. Subsequently, the validity of the previous argument for the present case, too, is argued for as follows (1007a1-4): The former pair, 'to be a man' – 'to be a not-man', contains a stronger opposition than does the latter, 'to be pale' – 'to be a man'; therefore you have to maintain that the members of the former pair are more strongly opposed than you doubtless will agree 'man' and 'pale' are one to-another. Consequently, *a fortiori* there cannot be a '*both-yes-and-no*' in case of 'man', so that your anti-LNC thesis is untenable in practical dispute.

The final remark is where the second argument, properly speaking, ends. The remainder (1007a4-b18) deals with some objections and evasive moves the opponent might come up with. Aristotle begins with an objection he is able to counter immediately, and which gives him the opportunity to drive home his favourite semantic rule once more:

*Ibid.* 3, 1007a4-18: But if he [i.e. the opponent] asserts that likewise [i.e. like 'man'] \*'the pale' signifies one and the same thing [viz. 'man's-being-pale', so that 'man's-being-pale' is also 'something one'], we shall repeat precisely the same we have stated before [at 1006b14-19], viz. that everything will be something one, and not only opposites. If this is not possible, what we have stated [at 1006b33-34] follows<sup>138</sup> [viz. that it is not simultaneously true to say that the same thing is a man and not a man] — if only he answers the point in question. But if, when asked simply [i.e. in terms of 'F' and 'not-F'], he appends <in his answers> the negations too, he is evading the point in question. For <it is *in confesso* that> nothing prevents the same thing from being both a man and pale and countless<sup>139</sup> other things; but still, if somebody asks whether or not it is true to say that [x]<sup>140</sup> is a man, the answer ought to signify something one [i.e. a quidditative unit], and not append that it is also pale and tall. <For

<sup>138</sup> Or should we take συμβαίνει to mean 'happens', viz. that in making distinctions between things, the opponent himself, by his practical behaviour, agrees that [x] is (an) F, and *not* simultaneously (a) not-F, thereby offending his own anti-LNC thesis?

<sup>139</sup> The phrase τὸ ἐρωτώμενον not only means 'the question asked', but also often 'that which the question is about', i.e. the specific point in question. Cf. my semantic Main Rule RIR; my section 1.71.

<sup>139</sup> Reading μυρία, not μύρια (Kirwan, *ad loc.*).

<sup>140</sup> The demonstrative pronouns τόδε and τοῦτο are sometimes used to represent a random example, and may be taken as our dummies [x], [y].

there being countless other attributes to be assigned> it is definitely impossible to go through the coincidental attributes of a thing, infinite as they are; so let him go through either all or none. So equally, even if the same thing is numberless times a man and not a man [viz. because at the same time being pale etc.], one ought not, in answering the question whether it is a man, to append that it is simultaneously a not-man, too; unless one is to append all the other coincidental things it is, or is not. But if he tries to do that, no dialogue is possible.

Again, Aristotle is pointing to the practical embarrassment his opponent will run into in a serious discussion with the defender of LNC. The man has no other choice than to observe Aristotle's semantic rule concerning the notion of 'signifying something one' and by the same token acknowledge the inevitability of LNC, unless he does not care, by maintaining his own blurred view of the meaning of that phrase, that he is now forced to undertake the mission impossible of enumerating the infinite list of all possible coincidental attributes he deems to equal the indefinite name, 'not-man'. Aristotle can safely assume that he has nicely cornered his opponent — unless indeed the man does not care to accept the mission impossible, and so frustrates the very dialogue.

However, Aristotle still refuses to let him off the hook. He now goes on to make clear that the very endeavour of metaphysics is jeopardized by people like his opponent. With this far-reaching corollary the second argument is rounded up. Here it is.

In general, our opponents really do away, Aristotle admonishes (1007a20-33), with οὐσία and what it is to *be* (τὸ τί ᾗν εἶναι). For they must maintain that all things are coincidental and that there is no such thing as 'being precisely a man' or 'being precisely an animal'. For if 'being precisely a man' does exist, that will not be 'being a not-man' or 'not being a man'; yet these are the negations of 'being precisely a man', and, on the opponents' *'both-yes-and-no'* view, they must be compatible with it. 'Both-and' indeed, for we have stated such formulas to signify something one, its ousia, that is. And to signify a thing's ousia comes to signifying that for it to *be* is nothing else. But if, as they maintain, for it 'to be precisely a man' should be the same as either 'to be precisely a not-man' or 'to not-be precisely a man', 'being precisely a man' will be something other than 'just man', and then they will be compelled to maintain that this kind of formula applies to nothing at all, as well as to concede that all things are just incidental combinations. Then Aristotle explains what is

meant by the expression 'being something coincidentally' as opposed to 'being precisely something': the paleness has only *fallen to* 'man', and is not precisely what a man is, because the man *is* pale, but is not what precisely pale is (ὅπερ λευκόν).<sup>141</sup>

Kirwan (100f.) judges the argument to be vulnerable in two respects. Firstly, he thinks that "it relies on a dubious theory of predication; for even if it is possible to make sense of the distinction between essential and coincidental predications, the former are no more statements of identity than the latter are". This objection relies on his disastrous confusion of semantics and syntax. In Aristotle's semantics of terms, naming is under discussion, not the framing of statements. Not statements such as 'This man is an animal' as opposed to 'This man is pale', or 'a pale thing' are under consideration, but the question how to bring up things for consideration, prior to any statement-framing. For example, how should names be assigned to things in order to secure the right focus for metaphysical investigations aiming at what precisely, for them, to *be* amounts to?

What Aristotle means to say throughout the present discussion is that if you are interested in the (metaphysical) question of the true nature of Being you should, in considering the essence of a particular pale man, say, Socrates, and in your search for 'the something one' that ontologically characterizes him, not take the notion of e.g. educatedness, or any other coincidental property of his, into consideration — however appropriately you can name him τὸ μουσικόν ('the educated' <thing>), and so on, when e.g. undertaking a study on (his) education etc. And in general you should not be led astray by any metaphysically inappropriate names, such as the different *quasi-ousiai* which Aristotle's Presocratic predecessors had fallen victim to.<sup>142</sup> So there is nothing of a "confusion between essential and accidental predication", as, in the wake of Owen (1986, 200-20), is argued by Kirwan (101). No doubt, names frequently are used in predicate (attribute) position, saying e.g. 'man is (quidditatively) a two-footed animal', or 'man is (coincidentally) an educated entity', but that is irrelevant to the issue of naming. Again, semantics is not syntax.<sup>143</sup>

<sup>141</sup> Cf. *APo.* I 4, 73b5-8. This distinction is of vital importance in the discussions found in *Met. Z.*

<sup>142</sup> Cf. *Met.* B 1, 996a6-8.

<sup>143</sup> Most commentators, including Ross, are in a constant habit of, unfortunately enough, rendering λέγεσθαι κατά 'to be *predicated* of', instead of sticking to the neutral translation (= 'to be said of'; so correctly Kirwan), which can be



Another objection made by Kirwan (101) is that “it does not follow rigorously from the opponent’s original admission that ‘man’ is being used with a single signification”. On behalf of Aristotle, one can easily counter it by remarking that Kirwan ignores the meaning of the phrase ἐν σημαίνειν (1006a32), which to Aristotle, stands not for ‘to have a single signification’ (as Kirwan takes it to mean), but ‘to indicate a quidditative unit’, as opposed to a coincidental unit. As a matter of fact, in the opponent’s view, any correct assigning of attributes, including the coincidental ones, comes to ‘signifying something one’, and since, still according to his view, indefinite names such as ‘not-man’ can be taken as alternative names<sup>144</sup> for attributes like ‘educated’, or ‘pale’, which are assignable to particular men, a man can truthfully be called *both* man *and* not-man. This being the heart of the controversial matter, it cannot come as a surprise that Aristotle so heavily insists on safeguarding the authentic meaning of the phrase, and ascribes the opponent’s denial of LNC to the man’s ignoring the decisive difference between ‘to signify one’ and ‘to signify about one’.<sup>145</sup>

The corollary is now continued (1007a33-b18) by arguing that, if ‘to signify something quidditatively one’ is inconsiderately lumped together with ‘to signify something incidentally one’, everything must be called some coincidental being, and, consequently, any appropriate categorization will be unachievable, blocked as it is by a regress to infinity we would meet with, when looking for the original suppositum (ὑποκείμενον) for ‘the things said of’ to inhere in.

The first sentence contains a minor philological problem. All our manuscript readings designate this suppositum with the phrase πρῶτον τὸ καθόλου, which Alexander, followed by all editors, proposes to change into πρῶτον τὸ καθ’ οὗ (= ‘a primary thing of which all other things are said’). This reading leads to the translation at b34-35: “If everything is said coincidentally, there will not be anything which

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indiscriminately used to refer to naming and sentence predication, but very often in Aristotle merely concerns naming (‘appellation’). Besides, they all fail to take Aristotle’s protocol language of statement-making into consideration, in which what they call ‘essential predication’ does not feature prominently, each and every assertible (Aristotle’s τὶ κατὰ τινός) being made up by notions from *different* categories; see my section 2.11.

<sup>144</sup> It will strike the modern reader that Aristotle very easily takes substantive and adjectival nouns as semantically interchangeable. In Greek, the borderline between substantives and adjectives is vague. See Kühner-Gerth I, 271-3; Ruijgh (1979), 70 and 81, n. 36.

<sup>145</sup> Kirwan failed to see Aristotle’s motive for introducing the distinction.

things are initially about" (Kirwan) — meaning, there will not be anything primary which <the other things are> about — "given that a thing's being incidental always implies its being said of a hypokeimenon". I think this interpretation is correct, but it can be refined by regarding the erroneous reading of the manuscripts as caused by haplography, and reading  $\pi\rho\acute{\omega}\tau\omicron\nu\ \tau\acute{o}\ \langle\kappa\alpha\theta'\ \omicron\upsilon\rangle\ \kappa\alpha\theta'\ \acute{\omicron}\lambda\omicron\nu$ , meaning "a primary thing, i.e. that about which <a thing is said> 'commensurately' (= '(formally) convertibly')".<sup>146</sup> Thus one gets a nice connection with what has been stated in the previous discussions about pointing out some *quidditative* unit, or 'something one', which is to be signified by any disputant, e.g. 'man' in respect of its convertible attribute, 'two-footed animal'. On this reading and interpretation of the Greek text, the occurrence of the dreaded regress *in infinitum* seems to be better accounted for as well:

*Ibid.*, 3, 1007a33-b6: If everything is said coincidentally, there will not be anything primary about which <a thing is said> convertibly, given that the thing's being incidental always implies its being said of a suppositum. Consequently, it will be unavoidable to go on *ad infinitum*. But that is impossible, for not even more than two combine;<sup>147</sup> for an attribute is only coincidental with an attribute because they both fall to the same thing. I mean for example that what is pale may be what is educated and the other way round, because they both fall to man. But Socrates is not educated in that way, meaning that they [i.e. being Socrates and being educated] both fall to some different thing.<sup>148</sup>

In the next few lines (1007b6-17), Aristotle says that if one still denies that there is an *ousia qua* primary thing making an end to the regress, one should be aware that a collection of attributes by themselves cannot possibly make up the 'something one' desired. And the coincidence of the different attributes taken by itself does not afford a terminus either, for this relationship is transitive: being pale is as much coincidental to being educated as the other way round. The only way out of the embarrassment is to assume that not everything is

<sup>146</sup> For the two-words expression  $\kappa\alpha\theta'\ \acute{\omicron}\lambda\omicron\nu$  see my sections 6.34; 6.71; for 'primary thing' my section 9.67.

<sup>147</sup> In this argument there is not the well-known Greek *horror infiniti*, but rather the warning that one cannot even arrive at the number three.

<sup>148</sup> The notion  $\sigma\upsilon\mu\beta\epsilon\eta\kappa\acute{\epsilon}\nu\alpha\iota\ \acute{\epsilon}\tau\acute{\epsilon}\rho\omega\ \tau\iota\nu\iota$  is a key notion in Aristotle's strategy of argument. Speaking semantically, it concerns the circumstance that a substantiated connotative term (such as 'the educated', which connotes educated-ness) must be taken to stand for a suppositum whose 'what it is precisely' ( $\acute{\omicron}\pi\epsilon\rho\ \tau\iota$ ) is not referred to by the connotative term. For example, the quiddity of  $\tau\acute{o}\ \mu\omicron\upsilon\sigma\iota\kappa\acute{\omicron}\nu$  ('the educated') said of Socrates, is 'man', not educated or educatedness.

said to be coincidentally. And this means that there must be some name signifying of a thing what it precisely *is*, its *ousia*, that is.

The final conclusion of the second argument runs somewhat brachylogically (1007b17-18): “And if that is so, it has been shown that it is impossible that contradictory states of affairs (or ‘statables’) should be said to obtain simultaneously”. This conclusion is, of course, not one drawn from the corollary, as is suggested by Kirwan (101), who judges it unwarranted; it is a repetition of the conclusion drawn from the argument proper which was finished before the corollary.

*Pace* Kirwan — who (93-102), by the way, has misgivings about the entire argument, the successive stages of which he deems “extraordinarily mystifying”, containing “baffling sections”, “not quite fair” towards the opponent, “unsatisfactory” and the like, and attacks Aristotle on various points<sup>149</sup> — the second argument does meet the requirements of an elenctical proof by pointing out that the opponent denying LNC gets himself into all kinds of embarrassment, as soon as he undertakes to uphold his denial. The consistent line of argument is to show that any dispute, including the one the opponent enters into — if only “he is to say anything”, which is the general requirement made in the introduction to the seven arguments (1006a11-17) — one way or another undermines the opponent’s ‘*both-yes-and-no*’ device.

### 7. 73 *Third argument (1007b18-1008a2)*

This argument attempts to attack the ‘*both-yes-and-no*’ device from still another point of view. Whereas the previous argument tried to exploit the substitution made possible by the opponent admitting the implication ‘*both* being a man *and* being pale, ergo *both* being a man *and* being a not-man’,<sup>150</sup> the present argument takes it the other way round: ‘*both* being a man *and* being a not-man, ergo *both* being a man

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<sup>149</sup> I cannot make much of the greater part of Kirwan’s comments. They partly seem to be beside the point in that he fails to understand the technical expressions Aristotle introduces (see above), and does not see the connections and internal references in the course of this extensive argument either. In addition, he raises contemporary questions that do not at all affect the (often quite modest) specific points Aristotle is trying to make in his merely elenctic argument against his opponent.

<sup>150</sup> Since the different names are assigned to particular instances, the logical difference between ‘being a not-man’ and ‘not being a man’ does not matter in the present context. See also the previous argument.

and being a warship, a wall', and so on, which all meet the condition for being a not-man. But if it is possible, as the opponent claims it is, to indifferently either affirm or negate<sup>151</sup> something of something else, what is implied can be extended this way: 'and equally well a not-warship, a not-wall, etc.'. Hence all things together (ἅπαντα) turn out to be just one thing, since *each* thing is [x], [y], [z] etc., as well as [not-x], [not-y], [not-z], and so on and so forth (1007b18-25).

This brings the opponent to the doctrine of Anaxagoras, that all things are mixed together, which results in the thesis that nothing really exists. So it is plain (οὖν) that, by asserting that all things are mixed together, these people create the impression that they are really stating something (albeit something indefinite), but while themselves *thinking* that they are stating that which *is*, they are actually dealing with what *is not*; for what is indefinite *is*, i.e. potentially, but actually *is not*. Our opponent must find himself in a similar position, Aristotle means to say, because by claiming that each thing is *both* [x], [y], [z] etc. *and* [not-x], [not-y], [not-z] etc. at the same time, he *seems* to be speaking about what *is*, however indefinite it may be, viz. 'not-man', 'not-stone' etc., but as a matter of fact he is dealing with what *is not*, viz. 'not a man', 'not a stone' etc. (1007b25-29).

Next Aristotle goes on to increase the opponents' embarrassment by presenting a rather intricate argument, which aims to show that in the case of [x], say 'man', the negations such as ['not-y'], ['not-z'] etc. holding good of [x] will be more to the point than its own negation ['not-x']:

*Met.* Γ 4, 1007b29-32: Moreover they must *admit* at least the affirmation or negation of *anything* to hold indifferently<sup>152</sup> of *every* subject, for it would be absurd that each thing's negation [viz. [not-x], [not-y], not-z] *itself* held good of it (i.e. [x], [y], [z], respectively), while the negation of some other thing [e.g. [not-a], [not-b], [not-c], which does not hold good of it, does not obtain of it.

An example is presented (1007b32-1008a) to make clear what is meant. If — as the anti-LNC '(both-yes-and-no') thesis claims — it is

<sup>151</sup> Negations (signified by indefinite names such as 'not-man') are intended in this context, rather than denials (e.g. 'is not a man').

<sup>152</sup> At 1007b31, and at b33 as well, the ἢ... ἢ ('either ... or') formula is used to indicate an alternative, not a disjunction; at b30 the alternative is indicated by a single ἢ; see our *Index s.v.* However, unlike b21, where it is said that the affirmation and negation equally obtain, at b30 and 33 the message is that the negation obtains *no less than* the affirmation, mind you.

true to say of a man that he is <also> a not-man (and of a tree that it is also a not-tree, and so on), evidently it is also true — and this is precisely what LNC (viz. ‘*either-yes-or-no*’) claims to be true — that he is *either* a warship *or* a not-warship. And if — according to the anti-LNC thesis — the affirmation (‘being a warship’) obtains of ‘man’, it follows that the negation too holds good of ‘man’. Now that is precisely what LNC claims, viz. that  $[x]$  is *either* a ‘man’ *or* a ‘not-man being a trireme’. And supposing that our opponent tries to evade the embarrassment by taking ‘not-man’ not for ‘warship’ this time, but, say, for ‘wall’ (see 1007b20-21), and is now going to assert that the affirmation, ‘being a warship’ does *not* hold of ‘man’, he must agree at least that, to *his* mind, the negation ‘not-trireme’ falls (ὑπάρχει) to ‘man’ more truthfully than the negation ‘not-man’, which was stated by the opponent in general terms, viz. merely on the ground of his anti-LNC thesis. And, consequently, if ‘not-man’ falls to ‘man’ — as is claimed by the opponent — ‘not-warship’ will as well, *a fortiori*. And, once again, the latter is what the adherents of LNC are claiming.

The argument ends up with the words: “But if that one [viz. the negation of ‘warship’] <holds good of  $[x]$ >, then the affirmation will do, too”, which implies that  $[x]$  is not only a man, but also a warship. I cannot make anything meaningful of this sentence, unless it is taken as a marginal gloss criticizing the previous argument, which has crept into the text from the margin. Should this surmise be right, the critic, referring to 1007b35-1008a1, reminds us that although the negation of ‘warship’ obtains more truthfully than that of ‘man’, the latter still obtains.<sup>153</sup>

#### 7. 74 *Fourth argument (1008a2-7)*

The fourth argument is just as concise as the first one. It is commonly held to concern the opponent’s denial of the law of excluded middle, LEM, and, thus, to anticipate the special discussion about LEM found in the seventh chapter of Book Γ. In my view, to meet your opponent with the charge that he is denying your other law too is not very impressive; in fact, in doing so, you are, by implication, acknowledging

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<sup>153</sup> I do not understand Ross’s paraphrase of the sentence either (“Since, then, A is not-A, it is *a fortiori* not-B, and therefore B”). Incidentally, it is less appropriate to oppose, with Ross, A to not-A, since the discussion is not about attributes as such, but actually concerns a suppositum  $[x]$ ,  $[y]$ , etc. possessing some contradictory attributes.

his being consistent. Anyhow, what Aristotle has in mind now is merely to point out that he who holds the ‘*both-yes-and-no*’ device of the anti-LNC thesis undermines, by the same token, the significance of asserting or denying generally. For if it is true that [*x*] *both* is a man *and* a not-man simultaneously, it plainly also follows that he will be *neither* a man *nor* a not-man, since from the truth of the first and second members of the copulative conditional the truth of the second and first members, respectively, of the apodosis is inferred. In Aristotle’s words: “For <this conclusion consists in> two negations of the two affirmations <of the anti-LNC thesis>; and if the former is a sentence composed out of two, the latter is so too, though it is its contradictory”.

This argument aims to embarrass the opponent by making clear that his position is bound to nullify any dispute, since that which should be the marrow of disputation, viz. to counter the interlocutor’s assertions with straightforward denials, is condemned to be reduced to pure verbiage. The introductory sentence, “This, then, happens to those who hold this view, and also ... etc.” (1008a2-3) is merely meant to connect the new argument to the previous one(s), but cannot be regarded as just a corollary to the third, because it attacks the opponent from a different point of view.<sup>154</sup>

#### 7. 75 *Fifth argument* (1008a7-34)

The main line of the fifth argument plays on the difficulty that the opponent *either* has to qualify the ‘*both-yes-and-no*’ device, which must lead *either* to there actually existing some definite instances of [*x*] possessing a certain form *without* simultaneously having its opposite (which would contradict the opponent’s anti-LNC thesis), *or* to recognize that this device, when taken strictly, inevitably makes the man’s case extremely vague (‘indefinite’ or ‘mixed up together’, as in Anaxagoras’s doctrine referred to earlier).

The first main part of the argument (1008a7-12) claims that if the opponent’s thesis admits exceptions the exceptional cases will form pairs of contradictories of which admittedly only one member obtains. To allow exceptions, then, at least jeopardizes the universal validity of the anti-LNC thesis, and thus its *necessarily* being true.

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<sup>154</sup> For the arrangement of the arguments see above, pp. 47-8.

The remaining portion of the argument (1008a12-34) starts, for the sake of argument, from the assumption that the anti-LNC thesis really has universal validity.<sup>155</sup> Its first part (a12-18) considers:

- (a) those cases in which the negation obtains wherever the affirmation does, and the other way round;
- (b) those cases in which the negation obtains wherever the affirmation does, but not the other way round.

In the latter cases (b), something will be securely *not* a thing that is, and the opinion concerning this will be firm. Now if a negative state of affairs is something firm and certain, the opposite affirmative state of affairs will be still more certain (a15-18). And this means that the ‘both-and’ device has taken a sharp blow. In the former cases (a), on the other hand, viz. if anything denied of something can equally also obtain of it, another dilemma should be countered, because, then, it is necessarily *either* true to assert the two opposite dictums (states of affairs) separately — for example, a thing’s-being-pale and again its-being-not-pale — *or* this is not true. If it is not true to assert them separately, then there is nothing the man is definitely stating,<sup>156</sup> so that in fact there is no state of affairs at all (1008a18-21). And, consequently, we may infer,<sup>157</sup> he is saying nothing, which infringes the iron rule that, to have a real discussion, you should at least ‘say something’ (1006a13).

Aristotle’s next move (1008a21-23) is to extend the explicit ban on separately stating the first member of the anti-LNC thesis to every thing whatsoever:

‘Of every [*x*’s-being-so-and-so] it obtains *both* that it is the case *and* that it is not’,

so that the opponent’s own ‘being the case’ too enters the danger area: “and also nothing at all is the case, but how could things-that-are not raise their voice or make themselves loudly sound?”<sup>158</sup> Another unpleasant consequence will be that all things are one, as

<sup>155</sup> Which does not prove, of course, its being *necessarily* true.

<sup>156</sup> The Greek has οὐ λέγει τε ταῦτα = ‘he does not state these things, <but only makes them sound>’, rather than ‘is not saying what he professes to say’ (Ross). For the subtle distinction between saying some words and merely making them sound without understanding them, see above, p. 47.

<sup>157</sup> See 1008a30-31.

<sup>158</sup> I could not resist the temptation to read at a23 βοήσειεν (‘cry aloud’ = ‘express one’s approval by acclamation’, as was usual in the Athenian assembly), instead of the common reading βαδίσσειεν (‘walk’) found in all our MSS., except for the Laurentianus, which reads νοήσειε.

was remarked before [1007b20-21], and that the same thing will be a man and a god and a warship *as well as* their contradictories.<sup>159</sup> For, otherwise, the difference between things would be something that *is*, without simultaneously not being the case, and this difference would be something definite and distinctive (1008a23-27).

If, on the other hand, it is possible to speak truth in stating things *separately*, what has been said just now follows equally well, and, in addition, there is the awkward consequence that all people would have the truth and all people<sup>160</sup> would be in error (1008a27-29), because *either* the affirmation uttered in separation from the negation, *or* the other way round, is erroneous. And it is the disputant maintaining the '*both-yes-and-no*' thesis who is himself actually admitting this (a29-30).<sup>161</sup>

Finally, returning to the case in which the separation of the members of the opponent's thesis is not allowed, Aristotle repeats (1008a30-33) that the adherence to the '*both-yes-and-no*' thesis unavoidably leads to the opponent 'saying nothing' (i.e. not 'saying something significant', as is required), so that any dispute is useless. For he who seriously defends the '*both-yes-and-no*' thesis or its logical counterpart ('*neither-yes-no*no') cannot help saying nothing definite, so that there simply is no target to attack. Aristotle concludes (a33-34) the argument by sighing: "If he did not, there would *eo ipso* (ἤδη) be something definite".

### 7. 76 *Sixth argument* (1008a34-b2)

The sixth argument plays on the grammatical affinity between 'true (false) affirmation (negation)'<sup>162</sup> and 'truly (falsely) affirm (negate)': "Given that<sup>163</sup> whenever the affirmation is true, the negation be false,

<sup>159</sup> Of course, that what *is signified* by these terms' (contradictory) indefinite counterparts, 'being a not-man', 'being a not-god' etc. is meant.

<sup>160</sup> Notice the copulative 'both all people "yes" and all people "no"', instead of the 'unseparated' formula 'all people both "yes" and "no"'.  
<sup>161</sup> For this way of arguing, which came to be known in later rhetoric as περιτροπή τοῦ λόγου (= 'turning the opponent's argument against himself'), Kirwan refers (104) to Plato, *Thaet.* 170A3-171C7, and Aristotle, *Met.* Γ 8, 1012b13-22; K 5, 1062a36-b7.

<sup>162</sup> Affirmative and negative dictums (which in Aristotle's deep structure analysis, are 'assertibles') are intended.

<sup>163</sup> In ordinary Greek, the conjunction εἰ is not only used to introduce a condition to be met, but also frequently (in Aristotle, too) a fulfilled one, i.e. "citing a fact as a ground of argument or appeal" (Liddell-Scott, *s.v.* VI); cf. Latin 'siquidem'. Hence my preference for the equally ambivalent phrase 'given that'. When



and the other way round, there can be no such thing as truly saying *both-yes-and-no* at the same time". Aristotle is well aware that such an argument is circular, and adds: "But perhaps they will say that this is the issue initially posed". Admittedly, the argument by no means satisfies the requirements for a fully-fledged disproof, let alone an epistemonical proof. Nevertheless, it may serve as an elenctic argument to point out that a disputant who only once blurts out "That's not true!" can be nicely countered by the above argument in order to merely put him out of countenance. And that is precisely what elenctic proof is all about.

### 7.77 *Seventh argument (1008b2-31)*

The line of this argument centres around the nature of subjective beliefs including the believer's attitude. First, the believer and the non-believer in LNC are taken into consideration. What should we think of the opponent's capability of proving that the '*both-yes-and-no*' thesis is true, whilst the '*either-yes-or-no*' thesis is false; and this considering the fact that all of us assume that to say the truth amounts to stating that which *is* in the nature of things? And supposing he does not have the truth, but has more truth than the defender of LNC, then the outside world should be supposed to be in a certain state, and this lands us up with the view that something is the case that is not simultaneously *not* the case:

*Met.* Γ 4, 1008b2-7: Again, are we to say that he who believes that things *either* are *or* are not in a certain state is in error, while he who believes they *both* are *and* are not has the truth. <If so, there is a problem regarding the definition of truth><sup>164</sup>, for if he has the truth, what can be meant by saying that such is the nature of things? If he does not have the truth, but is more right than the believer of the opposite view, then it immediately follows that<sup>165</sup> the things that are should be in *some* state, and *that* will be true, and not simultaneously not true.

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remarking (104) that "here, but not at Γ 7, 1011b25 and 8, 1012b7, Aristotle hesitates to appeal to the definitions of 'true' and 'false'", Kirwan (184) seems to ignore this use in Greek.

<sup>164</sup> The subsequent sentence with γάρ ('for') presupposes the well-known definition of truth which is also found at E 4; cf. Δ 7, 1017a31ff., and my sections 8.4-8.5. For the use of γάρ in elliptical phrases, where that of which it gives the reason is omitted, and must be supplied, see Liddell & Scott, *s.v.* I, 3.

<sup>165</sup> Rather than 'already' (Ross, Kirwan). For ἤδη indicating logical proximity, see Liddell & Scott, *s.v.* 4.

Next in order, Aristotle goes on (1008b7-12) to deal with the case that all people together are equally in error *and* speaking the truth. On this assumption, there will be nothing for them to say or assert, since they in fact simultaneously say “this” and “not-this”. And if they believe nothing, but are at the same time thinking and not thinking, how would their state be different from that of a vegetable? Here, as in what follows, Aristotle — skilfully, but perhaps unconsciously — makes use of the ambivalent meaning in Greek of phrases like οὐ φημί and οὐκ οἶμαι, meaning indiscriminately ‘not-say’, ‘not-think’, and ‘say that not’, ‘think that not’. The comparison with the vegetables suggests that at b11 ‘not-thinking’ is predominantly in his mind, whereas in the next lines (b12ff.) ‘thinking-that (both yes and)-not’ comes to the fore.

The next step of the argument is to argue that no human being, including the defender of LNC and his opponent, is in such a state of mind of simultaneously thinking-yes and thinking-no. Otherwise, why, for instance, does a man walk to Megara and not stay at home, when he takes this walk into consideration?<sup>166</sup> Clearly, he thinks that one thing is better, and another is not. For he neither seeks nor believes everything just indifferently. And if this concerns opinion rather than knowledge, one should be all the more anxious about the truth (b12-29), and not believe that what thinking is all about is just nothing, so as to be in a condition similar to that of a vegetable.

### 7.78 *Eighth argument (1008b31-1009a5)*

This final elenctic argument attacks the anti-LNC thesis from quite a different point of view. However much, Aristotle says (1008b31-

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<sup>166</sup> The codex Laurentianus and Alexander (followed by Ross, Tredennick and Kirwan) read δεῖν after βαδίζειν (‘when he thinks he ought to walk there’). I think the other MSS may be right in omitting δεῖν, because the point Aristotle wishes to make here is that taking a journey into consideration is bound to go with the ‘yes-or-no?’ deliberation, and is followed by the definite choice *either* for yes, *or* for no, which is brought to mind by moral or opportunistic reasons. The reading δεῖν suggests that the choice is between ‘should’ and ‘should-not’, whereas it is plain from the next lines that the choice is between walking to Megara and walking into a well or over a precipice. The addition of δεῖν might be brought to the scribe’s mind by the subsequent discussion (at b16ff.) about the question of *yes* or *no* in terms of what ought to be. I think that Ross’s argument (*ad loc.*) for restoring the reading of the Laurentianus and Alexander is not to the point, because he fails to see that Aristotle here tries to make a strong case for the view that ‘not-thinking/thinking-that-not’ should always concern something, never just ‘thinking’ and ‘thinking-not’, without any objective content.

1009a2), everything is *both* so-and-so *and* not so-and-so, at least ‘the more so’ and ‘the less so’<sup>167</sup> are inherent in the nature of things. For we should not say, he warns, that the things which are two and those that are three are *equally* even, or that he who thinks four things to be five and the one who thinks that they are a thousand are *equally* in error. One is obviously nearer to truth than the other. Consequently, there must be something true to which the more truthful is closer. Thus even if, in the wake of Plato, we hold that falsehood is composed of something true and something false, for instance odd numbers consisting of even numbers *plus* one,<sup>168</sup> and that its being made up out of two opposite things admits of degrees of excellence, yet this kind of ‘*both-yes-and-no*’ still implies some definite ‘*yes-and-not-no*’.

And even supposing this is not the case, at least there is something more firm and more truth-like (1009a2-3), so that there is a preferable part of the ‘both-and’ device, which really undermines it, because one member of the copulative proves to be definitely ‘preferable’, and definitely not ‘not-preferable’. And this being the case can successfully be advanced against the opponents of LNC to increase their embarrassment.

The conclusion of this final argument is somewhat solemn: “And perhaps we have now got rid of the undiluted thesis which aims at preventing<sup>169</sup> us from having anything definite in our thinking”. That this is the core of the anti-LNC thesis is patently clear, because, in this way only, one can get rid of the ‘*either-yes-or-no*’ device of LNC.

*Pace* Kirwan, who has grave misgivings about Aristotle’s elenctical arguments,<sup>170</sup> the various attempts Aristotle undertakes to corner his opponent by showing that as soon as he enters a dispute about

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<sup>167</sup> Aristotle’s speaking of ‘the more and the less’ may remind us of Pythagorean and Platonic views of (the generation of) numbers as well as things, referred to in *Met.* N 3, 1091a12ff.

<sup>168</sup> To understand this, one should be aware that the adjectives ἄρτιος (originally meaning ‘exceeding’, and περιττός (περισσός from περί) were used to indicate the respective ways in which even and odd numbers were written, the odd numbers with their last stroke exceeding the foregoing even ones; e.g. seven was written iiiiii<sup>i</sup>, with the last stroke exceeding the foregoing six. (I owe this information to the kindness of Professor C.J. Ruijgh). This practice went together with considering even numbers more perfect than odd ones, because the latter were thought to be composed of ‘even’ *plus* ‘one’ (which is itself not a number, but the ‘origin and measure of number’; see e.g. *Met.* Δ 15, 1021a12 *juncto* N 1, 1088a4-6).

<sup>169</sup> I take the participle κωλύοντος as *praesens de conatu*.

<sup>170</sup> As I have argued before, Kirwan’s judgement is mostly based on an incorrect analysis of the arguments, and/or a wrong interpretation of pivotal key notions.

anything whatsoever, he unavoidably gets entangled in insoluble difficulties, are all valid, considering their modest goal, not strictly to prove the untenability of the man's thesis — let alone presenting an epistemonical proof for the truth of LNC — but merely to attack the actual practice of dispute when it is embarked on in accordance with the anti-LNC thesis. To my mind, recognition of their validity is surely hampered by Aristotle's customary elliptical manner of expression, but it can be disclosed by accurately observing his manner of speaking, in particular his semantics.<sup>171</sup>

7. 79 *A corollary on the failures of the Protagorean doctrine*

In the fifth chapter Aristotle attempts to show that the adherents of the anti-LNC thesis find themselves in bad company, since, in its strongest version,<sup>172</sup> this thesis shows great affinity with the doctrine of Protagoras, a doctrine that is insupportable. In the framework of his attack on Protagoras — which, incidentally, is bound to remind us of Plato's attack found in *Theaet.*, 169Dff. — Aristotle presents some arguments which are implicitly linked up with Protagoras's doctrine, but are brought forward to undermine the anti-LNC device of '*both-yes-and-no*'. In fact, Aristotle deals with some examples of Protagoras-like reasoning taken from the changeability of things and our perception of contrary appearances. These indeed are typical instances of reasoning that could be adduced against LNC.<sup>173</sup>

Aristotle's opening sentence seems to (logically) derive the thesis of Protagoras from the anti-LNC position ("From the same opinion also derives the thesis of Protagoras, and the theories must *either* both be <true>, *or* both not be <true>"); but from 1009a16-17, it becomes clear that by this 'same opinion' the mental attitude underlying both views is meant. One should have an eye for the author's subtle allusion (at a7) to LNC's '*either-yes-or-no*' device. Their common fortune is explained (5, 1009a7-16) by pointing out that if Protagoras is right in asserting that everything that is thought or imagined is true, then everything must really be simultaneously *both* true *and* false, seeing

<sup>171</sup> Putting the elenctic way of arguing in a broader perspective, in the *Topics*, Aristotle often recommends a line of reasoning merely aiming to embarrass one's opponent.

<sup>172</sup> Aristotle is fair enough to take the anti-LNC thesis in its strongest version. The various versions were discussed at 4, 1008a7-15.

<sup>173</sup> The layout of the chapter is explained by Kirwan (107f.), and the discussion is aptly paraphrased by Ross (I, 272-4).

that many people have mutually contrary beliefs, and regard those whose opinions do not mesh with their own as being in error, so that the same thing must *both* be *and* not be. It might strike the reader that Aristotle is speaking here of *contrary* states of affairs (ἐναντία), instead of contradictory ones, as is required for the anti-LNC thesis. But this need not disturb us, because it is *particular* contrary cases that are under consideration, as clearly appears from the parallel passage in Book K 6, 1062b13-23, where the contrary states of affairs are taken to concern certain *particular* things. Contrary dictums (in Aristotle's deep structure analysis, 'assertibles') applied to particular cases are logically equivalent to contradictory ones, e.g. 'This wall's being white' vs. 'This same wall's being black'.

Next two types of proponents of the Protagorean thesis are distinguished and, accordingly, two ways of confronting them (5, 1009a16-22). The first class consists of people who have come to adhere to the erroneous doctrine, owing to their being perplexed by their observation of sensible things. Their mistake is easy to remedy, "for the confrontation does not concern any logical argumentation on their side, but their mental attitude" (a19-20). The second type of proponents are people who maintain the thesis of Protagoras for the sake of logical argument and relish combative and eristic debates.<sup>174</sup> They can be cured only by refuting their theory as argued for in what they say, and observing their own terminology. The first group is dealt with in the present chapter, the others will be considered in the next one.

Subsequently, Aristotle passes in review several ways in which those well-intentioned people may be perplexed by appearances. This sometimes happens to them when they are confronted with contraries developing from the same thing. They apparently believe that a posterior state of affairs must already be present in its actual counterpart, so that, say, [x] is simultaneously both pale and not-pale. Aristotle proposes to ask them to believe that, contrary to appearances, among the things-that-are there is also another kind of being-ness of which neither change nor destruction nor coming to be will obtain at all (1009a22-38).

In this connection, the doctrine of Protagoras comes up for more detailed discussion. When it comes to observing the things of the outside world, as well as the various judgements different people may

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<sup>174</sup> Kirwan (106f.), who rightly refers to *SE* 2, 165b11 and *Top.* I 12, 105a16-19, nicely describes the two kinds of adherents.

have about them— and even the same person at different times, it might seem — any talk of something being by itself *either* true *or* not true (as is implied by the Protagorean thesis), we are taught, is out of the question (1009a38-b12). Aristotle counters this view first in general terms: like some of the Presocratic philosophers, these people have succumbed to the erroneous view that the things-that-are are merely perceptibles, in which the nature of indefiniteness ('everything mixed in everything') is an important constituent. His reply is extensively instanced by references to previous philosophers (1009b12-1010a15).

Next these erroneous opinions are countered in more detail (1010a15-25).<sup>175</sup> First he corrects the view of changeable being held by all these people. Some of what is being discarded in a process of alteration is possessed by the thing discarding it, and some of what is coming to be must already be. Besides, one has to consider substantial change as opposed to incidental changes such as alteration, for there is an important difference between changing quantitatively (κατὰ τὸ πόσον) and according to the 'kind' or 'character' of something (κατὰ τὸ ποῖον or κατὰ τὸ εἶδος).<sup>176</sup>

In addition, Aristotle (1010a25-32) points out, it is only a small part of the whole universe those people are observing. They are only looking at what immediately surrounds them, not the bodies in the celestial regions, just as little indeed as the majority of terrestrial perceptibles. Hence it would be more just to acquit this part of the universe because of the other part than to condemn the other one because of this one. The author of the parallel passage of K 6 is more explicit on this score: "In general, it is absurd to make the fact that the things here are observed to be in change and never to remain in the same state the basis for our judgement about reality, for in pursuing what is really the case, one ought to start from the things

<sup>175</sup> Ross (following Bonitz) misinterprets 1010a15-35, by commenting (I, 276) that these arguments fail to show that change is reconcilable with LNC, since their purport has nothing to do with that reconciliation. For that matter, their purport is not "to reconcile change with the possibility of true assertion" (Kirwan, 109) either, but merely to make clear that to reject unchangeable being and truth as strictly opposite to, and ruling out, simultaneous not-being, is compulsory for anyone who makes unprejudiced observations about the (various) things-that-are.

<sup>176</sup> Of course, τὸ ποῖον, as often in Aristotle (e.g. as early as in the *Cat.* 5, 3b15-21), here equals εἶδος in the sense of 'essence'; cf. the parallel passage in *Met.* K (6, 1063a22-28), and Ackrill's comment on the *Categories* passage (1963, 88f.). Kirwan's remark (109) that Aristotle "oddly implies" that changeable things can change only in quantity and not in quality is entirely beside the point.

that are always in the same condition and undergo no change. Such are the heavenly bodies" (1063a10-15).

Finally, Aristotle once again recommends to the people under discussion the more probable doctrine that there must be a certain nature that is changeless. This time his recommendation is escorted by the warning intended for his opponents who adhere to the Heraclitean doctrine, that their maintaining that simultaneously<sup>177</sup> things *both* are *and* are not comes down to asserting that they are all at rest rather than in continuous change, because on this assumption, there is nothing for them to alter into.<sup>178</sup>

Aristotle goes on to answer the main Protagorean tenet put forward by the opponents, that everything that is thought or imagined is true (5, 1009a8-9), and proceeds to reduce the arguments they collected from all kinds of contrary appearances to nothing. It is particularly the arguments on account of the different impressions one may have of the same thing, e.g. 'sweet or bitter?', or of things perceived by persons at a distance as compared to those who are near, etc., in a word, which have come to be known as 'sceptical arguments', that receive the final blow.

First, it is claimed that even if our perception, at least of what is peculiar to a faculty, such as colour for sight, or sound for hearing, is not false, this is not to say that imagination<sup>179</sup> is the same as perception (5, 1010b2-3). Moreover (b3-11), the sceptical arguments sound somewhat odd coming from their mouth, for it is obvious that the people prompting them are not serious: at any rate if an expatriate in Lybia believes himself to be in Athens one night, he does not set off for the Odeon (the concert-hall there). Furthermore (b14-19),

<sup>177</sup> The word ἅμα ('simultaneously', 1010a35) is put right before the verb φάσκουσιν ('they maintain'), but *pace* Kirwan, its position should be explained as an anticipation stressing the notion of the simultaneity of 'being-yes' *and* 'being-no', rather than referring to people's maintaining something at the same time.

<sup>178</sup> *Pace* Kirwan (109) Aristotle does explain "why the Cratylean should be disturbed that the strong denial of PNC [= LNC, *De R.*] has a consequence inconsistent with his assumption that everything is changing" by pointing out that any *terminus ad quem* is missing ("for there is nothing for things to alter into"; 1010a37).

<sup>179</sup> The opposition between perception, taken as a cognitive process, and imagination qua perceptual consciousness is about the epistemological value of perception as a source of knowledge about the world. At *An.* III 3, 428a28-30 this relationship is explained: "I mean that imagination is the blend (συνπλοκή) of the perception of white with the opinion of <there being> the white thing". Cf. *ibid.*, 430b26-31, discussed below. So Kirwan (105) can make a strong case for his rendering the verb φαίνεσθαι and the noun φαντασία 'be imagined' and 'imagination', respectively, rather than 'appear' and 'appearance'; cf. *Met.* Δ 29, 1024b24ff, 1025b6.

our perceptions are not all given the same credit: for instance, in the case of colour it is sight, not taste, that is more authoritative, and in the case of flavour it is taste, not sight.<sup>180</sup> And each individual perception never states about the same thing in the same time that it simultaneously *both* is so-and-so *and* is not so-and-so. But not even at different times does one sense differently<sup>181</sup>, that is to say,<sup>182</sup> about the attribute itself, but only about its suppositum. For instance, the same wine might be thought sweet at one time and not-sweet at another, if there is an alteration either in it or in us, but the sweetness itself does not change, and any future sweetness necessarily is of that nature. But all these theses have no room for essences and what is of necessity, since they admit of things simultaneously being in one way *and* another (1010b19-30).

The chapter winds up with a sweeping statement (1010b30-1011a2). Aristotle claims that if only what is perceived (τὸ αἰσθητόν) were to exist there would be nothing if there were not animate things: for there would be no perception. If so, there would not be things perceived nor sense impressions. Now sense impressions *are* an affection of the perceiver. This does not, however, alter the brute fact that it is impossible that the substrata which give rise to perception should not exist apart from sensation, for sensation always has an object beyond itself, which must be prior to it. Aristotle recalls the general rule that what moves is prior in nature to the thing moved, and this obtains no less in case these things are called so with reference to one another.

This last remark alludes to *Cat.* 7, 7b35-8a12, where it is argued that although what is perceived and perception are relational beings, the former is prior. To understand this correctly it is useful to keep the semantic point of view in mind. If [*x*], say, a particular tree or stone, is designated as 'thing perceived', this name may refer to

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<sup>180</sup> The special objects of the four senses, concerning which no error is possible, are listed at *An.* II 6, 418a12-17. This view is qualified at *An.* III 3, 428b18-19 ("The perception of proper objects is true, or is only capable of error to the least possible degree").

<sup>181</sup> Pace Kirwan, who takes (translation) the aorist ἡμφισβήτησεν (1010b20) as a past tense ("was there dispute about the affection"), it should be taken as an *aoristus gnomicus*, indicating something occurring usually, rather than a past event. Cf. μετέβαλεν at b24, which seems not to be used to indicate past facts either, because then the imperfect tense would be more fitting.

<sup>182</sup> The enclitic particle γε gives emphasis to the preceding word or phrase, by opposing it to another or restricting it. Cf. its use at b23 τὸ γε γλυκύ = 'the sweet(ness) itself', taken as property qua distinguished from the sweet *thing*.



either the tree or stone that is perceived, but not *qua* perceived, or to the tree or stone *qua* perceived. It is only in the latter case that the ‘thing perceived’ and ‘perception’ are correlatives and simultaneous by nature (and really “reciprocate as to implication of being the case”; *Cat.* 13, 14b27-28), whereas in the former case, ‘thing perceived’ *qua* causing the act of perceiving is naturally prior to this act.

In the *Lexicon* this semantic procedure is explained in some more detail ( $\Delta$  15, 1021a30-33): ‘thing thought’ signifies that there exists thought of the thing (i.e. refers to this thing *qua* thought of), but this should not be taken to mean that thinking is correlative to that of which it is the thought, to the effect indeed that the two are completely interdependent, and that [x] has no being apart from its being thought of. Briefly, there is an important difference between ‘thing, which is perceived’ and ‘thing *qua* perceived’.<sup>183</sup> It is precisely this difference the Protagoreans ignore when they claim that everything thought or imagined is a real thing.

### 7. 8 *The complete correlation between ‘being’ and ‘being thought’ censured*

This chapter has been given different interpretations, which, I take it, are all unsatisfactory, especially because the interpreters have their misgivings about the conclusiveness of Aristotle’s way of arguing in common. And their difficulties are, in fact, due to their making anachronistic demands upon what Aristotle is trying to make clear, instead of taking his words as they stand. First, Aristotle’s strategy of argument deserves our attention.

#### 7. 81 *Aristotle’s strategy of argument*

The chapter opens (1011a3-13) with a reference to the previous distinction (made at 5, 1009a16-22) between those who are honestly convinced of the correctness of the Protagorean position (and, accordingly, the anti-LNC thesis) and those who only put it forward for the sake of argument, demanding their opponents to refute them by a genuine demonstration of LNC. Among both groups, Aristotle says, there are some who raise a difficulty by asking who is likely to be the proper judge of each class of question. The way in which they go

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<sup>183</sup> Compare the impact of semantics on this passage and its parallels, *Cat.* 7, *Met.*  $\Delta$ , 15, and *An.* III, 2.

about asking things is very much like puzzling over the question ‘Are we now asleep or awake?’ In fact, all such questions come to the same thing: they all demand an argument for everything. But such a position, it must be clearly understood, implies that there must be something for which there cannot be an argument, for a principle of demonstration is not itself susceptible of demonstration.<sup>184</sup>

People belonging to the sincere adherents of the anti-LNC thesis might easily be convinced of the latter point, which is not a hard thing to accept. The diehards, however, need special treatment, by making clear to them that what they are seeking will prove to be impossible. That is what Aristotle is now going to disclose.

Kirwan (113) charges Aristotle first (at 1011a11-16) with explaining his objections to undertaking refutation, but none the less thereafter (at a17-b12) actually undertaking it. In point of fact, however, Aristotle first attempts to convince the sincere adherents of the anti-LNC thesis that it holds good for any principle, not only LNC, and that it does not admit of real demonstration, and next sets out to undermine the position of those who argue merely for the sake of argument and do demand strict demonstration. He does so, not, of course, by offering himself a strictly demonstrative disproof of their view, but by making clear elenctically that their point of view is not at all viable. In the parallel passage found in Book K 6, 1063b7-11, the requirement previously stated<sup>185</sup> is alluded to: “For those to whom the difficulties mentioned arise from argument it is not easy to solve the difficulties to their satisfaction, unless they will posit something and no longer demand argument for it: for it is only thus that all arguing and all proof is accomplished; if they posit nothing,<sup>186</sup> they destroy discussion and all reasoning”.

Giving “only a tentative interpretation of this difficult paragraph” (1011a17-b3), Kirwan (113-5) starts from the wrong supposition that at a18-20, Aristotle is pushing an “emendation” of their position upon the Protagoreans, to the effect that they should say, not any φαivόμενον, but a φαινόμενον τινί to be true, and he asks “what would the Protagorean lose by adopting the emendation?”. In fact, this specification, rather than ‘emendation’, manages to forge the general line of argument the author needs against the people crying for

<sup>184</sup> For this sense of ἀπόδειξις see our *Index*, s.v.

<sup>185</sup> Γ 5, 1009a6-16 and 22-30 (= K 6, 1062b12-24).

<sup>186</sup> Thus ignoring the general requirement (*Mel.* Γ 3, 1006a12-13) that the opponent should ‘say something’.

argument. Aristotle's aim is to exploit the practical weaknesses of the relativity thesis, which, by definition, are implied in his opponent's stand. That is why he takes his opponent to agree that any φαίνεσθαι includes some entity as its point of reference, since 'to appear' is always 'to appear to [x]'. A harmless statement, the Protagorean could think, and one he is indeed ready to give his assent to. But he will soon experience that such a generous assent will be at the basis of all his embarrassments. In fact it provides Aristotle with the ammunition for two arguments (at 1011b4-7 and 7-12), by which he makes it clear that it is the assumed strict correlation between 'real thing' and 'thing perceived' that is bound to lead to unpleasant consequences. That is to say, unpleasant to the opponent himself, because he will be compelled to make contrary statements, by which any sincere search for real arguments is vitiated, and, accordingly, the person will turn out to "seek what is impossible" (1011a15-16).

Aristotle introduces his attack on the diehards with what Kirwan aptly terms an 'epigrammatic' utterance, which, understandably enough, has received different interpretations.<sup>187</sup>:

*Met.* Γ 6, 1011a15-17: But those who seek only cogency in argument seek what is impossible, for *they claim the legitimacy of stating contrary things*; well, forthwith they are actually stating them!

I take this sentence to mean that *their* looking for cogency in argument is a mission impossible, because cogency implies definite yes-or-no assertions, instead of simultaneously maintaining contrary utterances, of whose legitimacy *they* of all people are the champions. The final part of the sentence forms an ironical announcement of the two obvious self-contradictory conclusions implied in their view of the strict interrelationship between 'real thing' and 'thing perceived' ("well, we need not wait too long for their self-contradictions"), including such self-contradictory entailments that come from the very maintaining of the general theory, quite apart from any particular cases.

#### 7. 82 *On the relationship between 'real thing' and 'thing perceived'*

It will not come as a surprise that the two decisive arguments are preceded by an extensive explanation (1011a17-b3) of the fatal implication of the Protagorean doctrine concerning the reciprocal

<sup>187</sup> Ross (I, 280f.) discusses six of them, Kirwan (113) three.

relationship between ‘real thing’ and ‘thing perceived’. Aristotle is going to show that to ignore this relationship, including its qualifications (“at the time and in the style and manner that the thing is imagined”; a23-24) must deprive the argument of any cogency, because it inevitably leads to stating contrary ‘things’. The author begins by ascertaining that the assumption of even one thing as not being subjected to perception and just being in its own right is fatal to the Protagorean thesis, because ‘to appear’, which is always ‘to appear to [x]’, rules out any ‘being by itself’ apart from being perceived. The diehard who looks for serious argument has to be aware of this:

*Met.* Γ 6, 1011a17-24: If not all things are <merely> relative, but some things are also themselves in their own right, not everything imagined will be true. For what is imagined <is not by itself, but> is imagined by somebody, so that anybody who says that everything imagined is true makes every thing-that-is relative to something. Therefore, those who look for a compulsive argument, and at the same time demand to be called to account for their view, must guard themselves by saying that not that which is imagined *is*, but that which is imagined by the person who imagines it and at the time and in the style and manner in which it is imagined.

The adversary is now warned (1011a24-28) that if he tries to give an account of his view without observing these qualifications he will soon find himself saying contrary things;<sup>188</sup> for it is possible for the same thing to be imagined as honey to the sight but not to the taste; and, since we have two eyes, it is equally possible not to be imagined the same by the sight of each, if their sight is unlike.

In the following, Aristotle cleverly reminds<sup>189</sup> his opponents of their own considerations concerning perception mentioned earlier (5, 1009a38-b12), to the effect that the same things are imagined in contrary ways by many of the other animals as well as by ourselves; and even if they are perceived by the same person they are not always

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<sup>188</sup> Ross (I, 281) seems to have missed the point in remarking that Aristotle aims to show “that if they do not qualify their statement, they will break the law of contradiction — which of course to them is no objection at all”. What Aristotle has in mind actually is the fact that to demand cogency of argument is not consistent with admitting contrary things to be stated. Whoever admits this is permitting his opponent an escape from the demand for cogency.

<sup>189</sup> As often, this subtle way of arguing is introduced by ἐπεὶ = ‘incidentally’ or ‘for that matter’, which is commonly ignored by the translators (wrongly rendering it causally: “For”). For this concessive use of ἐπεὶ see Bonitz, 266a55-56. Liddell & Scott, *s.v.* B 4 take this use as elliptically causal (“<keep mum>, for <I can tell you> ...”). My *Index s.v.*

thought to be the same. By pointing out this phenomenon they have given Aristotle the rope to hang them with, for now he can answer that it occurs precisely because of the fact that all perception and imagination is relative to the percipient, including his modifications. So this part of the discussion can safely be finished by the somewhat ironical understatement (1011b1-3) that “perhaps it is on this account a must for anyone who argues, not because he feels a difficulty but for the sake of argument, to say, not<sup>190</sup> “this is true”, but “this is true to this person”.

Thus Aristotle’s Protagorean opponent has no other choice than to take the ‘being imagined’ as a ‘being relative to [x]’ quite seriously. The poor man has no idea that precisely this agreement will confront him with two fatal contrarieties, which *eo ipso* will show that his obstinate demand for cogency in argument is, from the practical side too, self-contradictory.

The reader is fully prepared now to gauge the value of the two arguments completing the refutation of the Protagorean doctrine the anti-LNC sodality believed itself to be supported by.

### 7. 83 *The refutation of the Protagorean thesis completed*

The first argument (1011b4-7) states in plain speech that whoever is forced to make everything relative to perception and opinion, has no answer to the undeniable fact that things often happen without being thought of beforehand:

*Met.* Γ 6, 1011b4-7: Indeed, as was said before [1011a19-20], they must make all and everything (ἅπαντα) relative, i.e. relative to opinion and perception, with the result indeed that nothing has either come to be or will be without someone first having opined it; and if things *have* come to be or will be <without someone’s first opining them>, evidently not all and everything will be relative to opinion.

This argument can, of course, only be effective if one takes for granted that the opponent shares with Aristotle the ‘realistic’ ontological conviction that there *are* things independent of the human mind. To be sure, it was quite common in Ancient days to start from this unreflected conviction, and so the Protagorean doctrine bears no resemblance to anything like “Bewusstseinsphilosophie”.

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<sup>190</sup> The Greek has the negation ‘not’ before ‘true’ (and in the common translations it is left there), but logic requires the prolepsis of the negative particle.

The other argument Aristotle (1011b7-12) puts forward to show that the Protagorean doctrine is untenable owing to self-refutation, is surely not of a similar transparency and has been given various interpretations. As a matter of fact, Aristotle's way of expression is once again "dangerously elliptic". Here is the text:

*Ibid.*, 1011b7-11: ἔτι εἰ ἓν, πρὸς ἓν ἢ πρὸς ὠρισμένον· καὶ εἰ τὸ αὐτὸ καὶ ἡμῖς καὶ ἴσον, ἀλλ' οὐ πρὸς τὸ διπλάσιόν γε τὸ ἴσον. πρὸς δὲ τὸ δοξάζον εἰ ταὐτὸ ἄνθρωπος καὶ τὸ δοξαζόμενον, οὐκ ἔσται ἄνθρωπος τὸ δοξάζον ἀλλὰ τὸ δοξαζόμενον.

Ross (I, 279; 282f.) takes this argument to lead to two different unacceptable conclusions, both inferred from the statement found at b7-9, which is rendered thus: "Further, if a thing is one, it is relative to one thing or to some determinate number of things; and if the same thing is both half and equal, still the equal as such is not relative to the double to which the half as such is relative." The first unacceptable conclusion is, on Ross's interpretation (b9-11): "If, in relation to the thinking subject, man and the object of thought be the same, man will not be the thinking subject but the object of thought". He paraphrases the reasoning thus (282f.): "If man is man simply because he is thought to be so, his being is comprised in a relation to a thinking subject. In this relation he can only be that which is relative to the thinking subject, viz., an object of thought; and since the relation is his whole being he cannot also be a thinking subject. I.e. if the *esse* of man be *percipi*, he cannot *percipere*. Which is absurd".

I cannot see, however, why these premisses should rule out the view that man, quite apart from being the object of thought, is *also* the thinking subject. Ross's presumption, that, in the context of this argument, man's relation to a thinking subject "is his whole being" so that "he cannot also be a thinking subject", does not find any support in the text and, what is worse, perhaps, his anachronistic interpretation supposes Aristotle to consider the Protagorean a Lockean *avant la lettre*.<sup>191</sup> Aristotle's previous statement (b7-9) — which, incidentally, only acts as an intermediary step to the final conclusion of b11-12 — is to the effect that, in the framework of his own focal argumentation which merely bears on 'man' *qua* related to the thinking subject,

<sup>191</sup> The Protagorean thesis claims that all our perceptions are merely subjective and cannot, accordingly, guarantee reliable knowledge of the outside world, but it does by no means imply that there is no outside world independent of our perceptions.

‘man’ is to be taken only as representing the object of thought, not as being, in addition, the thinking subject. Well, this is a harmless statement, which would surely not embarrass his Protagorean opponents.

What Ross regards as the second argument runs as follows (on his reading):

*Ibid.*, 1011b11-12: εἰ δ' ἕκαστον ἔσται πρὸς τὸ δοξάζον, πρὸς ἄπειρα ἔσται τῷ εἶδει τὸ δοξάζον.

Ross translates (Oxford Translation): “And if each thing is to be relative to that which thinks, that which thinks will be relative to an infinity of specifically different things”. In his commentary, Ross (I, 283) comments: “The second argument may be put thus: ‘If everything is relative to the thinking subject, the thinking subject is relative to an infinite number of specifically different things’, and therefore, since each relative term has a correlative different from that of any other relative term (lines 7-9), the thinking subject will have to include in it an infinite number of specifically different aspects, so that definition of it will be impossible. Which is absurd.”<sup>192</sup>

So far, so good, but, the reader may now ask, So what? As so often, ‘infinite number’ indicates an indefinite number, or a countless multitude;<sup>193</sup> anyway, it involves a potential infinitude, not an actual one. Now there is no misfortune at all in concluding that the thinking subject includes in it an infinite number of things. On the contrary, this would be in perfect accordance with the famous Aristotelian adage ‘anima quodammodo omnia’.<sup>194</sup>

Kirwan (115f.) is of the opinion that “compression and inadequate terminology obfuscate the argument”. Compressed this concise argument surely is, but I cannot find any inadequate terminology in it. For that matter, Kirwan’s hesitant paraphrase of the argument is based upon his own analysis, splitting up the argument into five steps, of which he thinks the fifth one does not follow from the fourth. This analysis, however, is not convincing at all since, like Ross, Kirwan apparently ignores the illative force of Aristotle’s manner of reasoning by analogy.

<sup>192</sup> Tricot *ad loc.* follows Ross slavishly: “... le sujet pensant étant, en fait, relatif à une infinité d’objets pensés, il se dissoudra en une poussière d’objets, et sa définition sera impossible, ce qui est également absurde”. There is a similar interpretation in Reale I, 315 and 352, note 8 thereto.

<sup>193</sup> See Liddell & Scott, *s.v.*

<sup>194</sup> *An.* III 8, 431b21.

In fact, for the sake of the argument Aristotle starts by assuming the Protagorean thesis (“Everything that is thought or imagined is real”) and taking it to imply that ‘real’ things are one and the same as ‘things opined’. In a first step it is stated, then, that ‘being one and the same’ is a property that is relative to something definite; or to put it differently, something one or definite is required for acting as the point of reference of equality:

*Ibid.*, 1011b7-8: If a thing is one, it is so relative to something one or definite.

Putting this first step differently, by way of paraphrase: “If ‘thing opined’ is one and the same as ‘real thing’, then this being one and the same is relative to something one and definite”. Of course, by this ‘something one and definite’ one has to understand the opining subject, as will also be clear from lines b9ff.

In the next step, the notion ‘being one and the same’ is put to the test. In fact, Aristotle sets out to undermine the concept of identity used by the Protagoreans and thus to qualify the Protagorean identification of ‘real thing’ and ‘thing opined’. This step is accomplished by means of a mathematical rule specifying the notion of relational property:

*Ibid.*, 1011b8-9: And if the same thing is both a half and an equal, yet it is not equal relative to the *double*, [relative to which it *is* a half].

What Aristotle tries to make clear is that if  $[x]$ , say 10, is both a half, viz. of 20, and an equal, e.g. to  $[7+3]$ , then its being *both* a half *and* an equal does not imply that in both capacities it has the same relationship of equality, because our  $[x]$  is really an equal (viz. to  $[7+3]$ ), but is not by the same token 20’s equal. Putting it formally:

“If  $[x]$  is *both*  $\{1/2 [20]\}$ , *and* equal to  $[7+3]$ , then not:  $[x]$  *qua* equal is equal to  $[20]$ ”.

In the third step, this rule is analogically applied to the key elements of the next sentence, viz. the opining subject (τὸ δοξάζον), the thing opined (τὸ δοξαζόμενον) and ‘man’ (ἄνθρωπος). The following analogata may now be observed:

- (a) the ‘real thing and thing opined being one and the same’ corresponds to ‘the one’ (ἓν) found in the prodosis of 1011b7;
- (b) the phrase πρὸς δὴ τὸ δοξάζον at b9-10 corresponds to ‘relative to something one or definite’ (πρὸς ἓν ἢ πρὸς ὀρισμένον) at b7-8;
- (c) τὸ δοξάστον (=‘the opining subject’) at b9-10 and b11 and 12 corresponds to ‘the double’ (τὸ διπλάσιον) at b9;



(d) ‘man and thing opined’ (ἄνθρωπος καὶ τὸ δοξαζόμενον) at b10 corresponds to the phrase ‘both a half and an equal’ (ἥμισυ καὶ ἴσον) at b8, whereby ‘man’ corresponds to the infinitely variable property ‘a half’, and ‘thing opined’ to ‘equal’.<sup>195</sup>

This analysis of the argument leads us to the following translation of the subsequent two steps:

*Ibid.*, 1011b9-12: Clearly then (δή), if in respect to the opining subject a <real> man is identical with the thing opined, then man will not be the opining subject, but <merely> the thing opined. Now if *each* thing [i.e. not only ‘man’, but also ‘tree’, ‘stone’, and so on] will have the relation of equality to the opining subject, the opining subject will be an infinity of specifically different things.<sup>196</sup>

What Aristotle means to say is that if ‘man’ is both a real thing and a thing opined, then it possesses the relational property of equality only regarding the thing opined, not with respect to the opining subject. In other words: Just like [x] qua being a half of [20] does not have its relational property of being an equal (viz. of [7+3]) regarding [20], quite so ‘man’, in its capacity of ‘being an equal’ (viz. regarding the thing opined) does not have the property of equality with respect to the opining subject. Therefore the opining subject can only be one and the same as the different things opined — which the Protagorean thesis claims is the case — if it is, apart from being a man, an infinite number of specifically different things, such as horse, tree, stone, and so on. This is, by itself, not unacceptable, in view of the ‘anima quodammodo omnia’ thesis, but it contradicts the requirement assumed at the outset (viz. in the apodosis of b7-8), that each relationship of being-one-and-the-same should be relative to what is one or definite. Just as ‘double’ by itself is something indefinite (because it is infinitely variable, viz. double of 1, 2, 3, and so on *ad infinitum*), so ‘opining subject’ is something indefinite (because opining what?); and thus, in virtue of the rule of 1011b7-8, it cannot act as a point of reference for the relationship of equality (‘being-one-and-the-same’) assumed by the Protagoreans to exist between real thing and things opined, no matter *what* things.<sup>197</sup>

<sup>195</sup> This precisely is the opponents’ thesis, one should bear in mind.

<sup>196</sup> I think our two oldest MSS (the Parisinus and the Vindobonensis) should be followed in omitting at b12 πρὸς before ἄπειρα, since the balance of logical consistency is in favour of their reading. Ross (I, 283) who, because of the balance of authority (the Laurentianus and the Greek Commentators) maintains πρὸς ἄπειρα, agrees that “evidently ἄπειρα would give a good sense”. Reale (*ad loc.*) rightly follows Schweigler (*Met.* III, 182) in cancelling πρὸς.

<sup>197</sup> The whole argumentation of 1011b7-12 offers a nice example of what I have

## 7. 84 Aristotle's summary of chs. 3, 1005b8 to 6, 1011b12

In the remainder of the chapter (6, 1011b13-22) Aristotle summarises the contents of 3, 1005b8 – 6, 1011b12. He is fully convinced that his various arguments against the adherents of the anti-LNC thesis are successful, and that the consequences of this thesis as well as of the cognate Protagorean thesis are fatal for his opponents. Both contradictory and contrary states of affairs ('statables') cannot simultaneously hold good of the same thing.

The phrase τὰς ἀντικειμένους φάσεις at 1011b14 is commonly taken to mean contradictory *statements* (e.g. 'Socrates is pale' *vs.* 'not: Socrates is pale'), as by τὰναντία (b17ff.) contrary *statements* (e.g. 'Socrates is pale' *vs.* 'Socrates is black') are understood. In fact, these φάσεις<sup>198</sup> are contradictory and contrary 'states of being' (or incomplete 'dictums' or rather 'assertibles'), such as '[x]'s being pale' *vs.* 'not being pale', and '[x]'s being pale' *vs.* 'being black', respectively.<sup>199</sup> In this context it should be borne in mind that Aristotle (rightly) puts contrary and contradictory statables in one box, since, as far as LNC is concerned, they both concern particular things, such as 'Socrates', 'this man' etc. (my section 7.79).

The way in which he explains (1011b18-20) why contraries too are involved in LNC is interesting: "for one of a pair of contraries is a privation no less than it is a contrary, a privation of ousia, that is; and a privation is the negation <of something> that affects some definite genus". This explanation should be completed by what is said at *Met.* I 4, 1055a33-b8, where Aristotle claims that the primary contrariety is that between a positive state or mode of being (ἔξις) and privation (στέρησις), which is called a kind of contradictory state, because, he says (1055b4-8), "what suffers privation, either in general or in some determinate way, is either that which is quite incapable of having <some mode of being>, or that which, being of such a nature to have it, does not actually possess it; [...] privation, therefore, is a contradictory state or <a subject's factual> incapacity — which is typical of that particular subject — to have a positive state it <by nature> is receptive of".<sup>200</sup>

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termed earlier (section 2.7) 'focalization'.

<sup>198</sup> For this meaning of φάσις see my section 2.21.

<sup>199</sup> For Aristotle's general habit of dealing with what we call 'dictums', rather than statements (the ignorance of which must frequently lead to misunderstandings), see my sections 2.16; 3.66 and 3.69.

<sup>200</sup> E.g. blindness is a privation in man and other animals; cf. *Met.* Δ 22,

As is clear from the parallel between logically ‘being assigned to’ and ontologically ‘falling to’ as found in the final sentence of the passage (1011b20-22), LNC is about assigning contradictory and contrary *states* or *modes of being* to things which cannot simultaneously fall (ὕπαρχειν) to one and the same thing. It is not about contrary and contradictory *statements*, as is commonly held. Evidently, it is contrary or contradictory *states* or *modes of being* that cannot simultaneously fall to subjects, not contrary or contradictory *statements*:<sup>201</sup>

*Met.* Γ 6, 1011b20-22: “So if it is impossible simultaneously to truly affirm and to negate <some state of some subject>, it is also impossible that contrary states should fall to <some subject> simultaneously — unless either both fall to it in a certain way, or one in a certain way and the other without qualification.

That the contrary and contradictory members are (complete or incomplete) assertibles, rather than fully-fledged assertions, can also be clarified from another point of view. In the course of his metaphysical investigations, Aristotle develops LNC (and LEM) to refute metaphysical views held by his precursors and contemporary opponents. To do so successfully, he only has to show that contradictory positions represented by ‘*that*-clauses’ or assertibles will follow from the theses held by his opponents, irrespective of whether these positions are actually advocated (‘asserted’) by them or not. In point of fact, they were wise enough not to themselves assert such contradictory positions.

Thus Aristotle’s confutation of the opponents of LNC basically rests on the distinction between ‘assertible’ and ‘assertion’, which plainly comes to the fore in his deep structure analysis of the statement-making utterance (my sections 2.14-2.16).

### 7.9 *The arguments in favour of LEM. How to assess them*

Kirwan (116) has rightly observed that the arguments in defence of the law of excluded middle (LEM) — which states that there are only two possible truth-values, viz. truth and falsehood – are presented in summary form and occupy less than a tenth of the space given to

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1022b22-31.

<sup>201</sup> Socrates either has the state of paleness or not-paleness, but not the property conveyed by the statement ‘that Socrates is pale or not-pale’. My section 3.53.

LNC in the preceding four chapters. He thinks the reason is partly that doubt about LEM had been expressed by none of Aristotle's predecessors except for — so Aristotle (1012a24-28) thinks — Anaxagoras; and partly that Aristotle's diagnosis of the LEM-sceptic's state of mind (found at 1012a17-24) is the same as the LNC-sceptic's, and so requires no new discussion. Kirwan concludes his evaluation of Aristotle's intentions concerning LEM by remarking that Aristotle's "diagnosis shows that he does not, either, share the inclination of some modern logicians to regard LEM as *more* doubtful than LNC".

In order to rightly assess Aristotle's view of LEM let us begin by commenting on Kirwan's rather cryptic remark (116) about "the inclination of some modern logicians to regard LEM as more doubtful than LNC". He is probably alluding to the existence of many-valued logics, systems of logic, that is, in which other 'truth-values'<sup>202</sup> have been introduced. In a bivalent system of logic, on the other hand, it is held that every proposition is either true or false, and although there are intermediate possibilities between being certainly true and being certainly false, or between being known to be true and being known to be false, there are none between 'true' and 'false' themselves.

As early as in Antiquity and the Middle Ages, thinkers seemed to have entertained the view that there might be other possibilities, more than two truth-values, that is. These speculations were linked up with their attempts to solve the problem of the so-called 'futura contingentia', which was tackled for the first time by Aristotle in *Int.* 9.<sup>203</sup> The Epicureans seem to have been the first to question the rigorous validity of the law of bivalence. In the Middle Ages the issue was connected with the problem concerning God's foreknowledge of contingent future events. A particularly eager debate took place in the Southern Netherlands, where in the young university of Leuven (Louvain), Petrus van der Beken (Petrus de Rivo, *d.* 1499) was the

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<sup>202</sup> The word 'truth-value' is a neutral term covering the value 'falsehood' as well.

<sup>203</sup> Weidemann (1994, 223-324) has an extensive section on this problem, including its history. A.N. Prior (1957) was the first to make an attempt to interpret Aristotle's view of future contingents in terms of three-valued logic. Rescher (1963, 43-54) offers an account of Aristotle's doctrine of future contingents in terms of LEM. It should be emphasized though that the so-called fatalistic (rather than 'determinist') argument of *Int.*, ch. 9 plays such a modest role in the discussions of that chapter that it is definitely mistaken to think it concerns Aristotle's philosophical view on future contingents, as is often claimed; my section 3.6.

main advocate of Pierre Auriol's (*d.* 1322) conception of a three-valued logic in order to solve theological problems.

In modern times the logical issue has been worked out in more general terms, inquiring in a rigorous mathematical way into the laws a many-valued logic might, or should, contain. This theoretical development regards the recognition that LEM is exchangeable for an alternative law governing some alternative system of logic, and, *pace* Kirwan, has nothing to do with an inclination of modern logicians to regard LEM as doubtful, just as the adoption of a non-Euclidean system is not a rejection of the validity of Euclid's geometry either. Alternative systems of logic only aim to serve to analyse a broader range of phenomena than two-valued logic is equipped for. As for two-valued logic, the present version of LEM is far more than just one of its laws. It is its definitorial constituent, to the effect indeed that two-valued logic is defined as a system of logic in which truth and falsehood are postulated as the two only entities to serve as the points of reference for accepting or rejecting apophantic expressions.<sup>204</sup>

In view of all this, if one were to suggest that in defending the possibility of a third 'truth-value', viz. something in between truth and falsehood, the champions of the anti-LNC thesis were about to discover the essentials of many-valued logic, it should be stressed that their rejection of LEM involves nothing of the kind. In order to assess the discussion of the present chapter we should look for its coherence with the foregoing dispute about LNC. So far, LNC was attacked head-on by people who denied the 'either-or' device of LNC, by defending the 'both-and' device: states or modes of being, they claimed boldly, are not *either* true *or* false, but *both* true *and* false. The opponents are now supposed by Aristotle to change their tactics and to rule out the 'either-or' device of LNC by making out a case for the device 'neither-nor'. Thus Aristotle now has to devise a strategy of guarding LNC at its flanks, by destroying any idea of a third possibility apart from truth and falsehood.

There is a natural transition between our chapter and the final part of chapter six: the transfer of the idea that contradictory states

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<sup>204</sup> Kahn, who notes (1973, 369) that "it is typical of Aristotle (and probably of Plato as well) that he thought of truth-claim or assertion as two-valued, like true and false or affirmation or denial", traces this duality back to Protagoras's 'Homomensura' formula, and, ultimately, to the 'two ways' of Parmenides: ἔστι and οὐκ ἔστι.

cannot be true simultaneously to the idea that the same applies to contrary states was made for only a special kind of contrary states, viz. those “either holding good in a certain way, one in a certain way, and the other *simpliciter*” (1011b21-22). It is all but surprising, then, that one should ask how things are in the case of contrary states admitting of an intermediate, as ‘pale’ and ‘black’ having e.g. ‘grey’ as an intermediate.

### 7. 91 *The seven arguments in support of LEM*

Aristotle starts his discussion of LEM by formulating this law :

*Met.* Γ 7, 1011b23-24: Nor, again, is it possible that there should be anything in the middle of a contradiction, but of one subject you must either affirm or deny any one attribute.<sup>205</sup>

Seven arguments are then put forward in support of this law, all of which are to be understood in the ambience of a (tacitly presupposed) bivalent system of logic. Accordingly, they all intend to show, elenctically, that is, that any living up to the denial of LEM will be unworkable.

The first argument (1011b25-29) is based on Aristotle’s operational definition of truth and falsehood, and concludes that the denial of LEM, to the effect that there is something in between true and false, is inconsistent with this definition, which *eo ipso* does not admit something to be in between:

*Ibid.* 7, 1011b25-29: This will be clear if we first define what truth and falsehood are, namely, to say that what is *is not*<sup>206</sup> or what is not *is*, is a falsehood, while to say that what is *is* and what is not *is not*, is true, so that also he who is speaking of ‘be’ or ‘not be’ will either speak truth or speak falsity, but <by the opponent> it is said neither of what-is nor of what-is-not that it is *or* is not.<sup>207</sup>

<sup>205</sup> Of course, this ‘must’ only concerns the cases in which you are about to make an utterance about some object which is liable to provoke assent or dissent from the interlocutor. So there is, *pace* Kirwan (116), no reason for charging Aristotle with an incautious formulation. By the way, LEM is more than once applied by Aristotle, e.g. at *Cat.* 11, 14a14.

<sup>206</sup> Kahn (1973, 336, nr. 7) adds ‘(so)’ after ‘is not’ and ‘is’, and explains his introduction of ‘(so)’ to indicate “the more strictly veridical or semantic use of the verb, which occurs in Aristotle’s text as the participle”, and takes the infinitive εἶναι to represent the descriptive content of this ‘so’. But it is plain that on this interpretation, the ‘being *qua* truth’ doctrine is obscured instead of (transformationally) elucidated. For that matter, *Met.* Δ 7, 1017a31-2 is not explained (*ibid.*, 332) along these lines, and *Met.* E 4, quite understandably, is not even discussed by Kahn.

<sup>207</sup> See also the discussion of ἀντίφασσις in my section 2.21.

Evidently, the opponent may reject the two-valued-logic definition of truth, but as long as he continues to use the terms 'true' and 'false' with reference to the two extremes of his own (supposed) three-valued system — as he is bound to do, because he is opposing Aristotle by introducing a third value in between *Aristotle's* 'true' and 'false' — he cannot escape the conventional definition of truth and falsity.

The second argument (1011b29-1012a1) questions the workability of the notion of 'intermediate'. Two possible senses of the term are distinguished. An intermediate may *either* be of the (definite) sort of 'being grey' in between 'being pale' and 'being black', *or* something in the way in which some (indefinite) what-is-neither-of-the-two (τὸ μηδέτερον) is in the middle of 'man' and 'horse'. Both possibilities are submitted to heavy criticism from the viewpoint of the intermediate taken as a possible starting or stopping-place for the change from one of its extremes to the other.

First, the 'in the middle of man and horse' analogon is dealt with. In this case, any change, to wit from this vague, adulterated entity to one of its extremes 'false' or 'true', is ruled out: for real change always occurs between what is genuinely [*x*] (read 'true') to what is genuinely [*not-x*] (read 'not-true'),<sup>208</sup> rather than starting from such an unclear, adulterated entity (read 'neither-true-nor-false-thing') — which is comparable to 'something in the middle of man and horse' — to either 'true' or 'false'. As a matter of fact, any intermediate is constantly observed to change into one of its extremes, as there is never any change except in the direction of opposite or intermediate states. But the opponent's putative intermediate cannot meet these conditions. Therefore to assume there is such an intermediate does nothing but build a castle in the air.

To Aristotle's mind, in the case of intermediates of the sort of 'grey-in-between-pale-and-black', things are equally preposterous. Surely, there *seems* to be some definite starting- or stopping-place for the change in the direction of true or false; but on closer inspection you must agree that in such cases too there would have to be a kind of change into the extreme 'pale', which did not actually start from 'not-pale' — on the assumption, that is, that the process of change (or becoming) is from 'what is grey' to 'what is pale'. However, when some grey [*x*] changes into something pale, the process should be

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<sup>208</sup> My rendering of ἀγαθός; cf. Bonitz, *Index*, 3b26-30.

taken as going from not-pale (i.e. 'grey' qua 'not-pale') to 'pale', but as it is, this is never seen. And thus there still is a two-step process from 'either'[x]' to 'or [not-x]' as supposed by LEM, rather than a three-step one as assumed by the opponents of LEM. Evidently, Aristotle's view of the process of change including its *qua*-functor semantics is at the basis of this line of argument.<sup>209</sup>

The third argument (1012a2-5) is taken from the operation of the mind. For any discursive as well as intuitive thought<sup>210</sup> it holds good that the mind *either* asserts it *or* denies it, whenever it says what is true or false: this is plain from the definition, Aristotle adds. What he means to say is that whenever the mind no longer refrains from taking sides concerning 'yes or no', the choice is always between 'yes, it is the case' and 'no, it is not the case'; there is no intermediate operation between 'yes' and 'no' once the mind has decided to speak. Recalling the above definition of truth and falsehood, the mental process may be described thus: "whenever in asserting or denying something, the mind frames *this* combination <of substrate and attribute>, it has the truth; whenever <it frames> *that* <combination>, it is in error (viz. by asserting or denying it)". Supposing, for instance, that Socrates actually is ill, the mind may frame the composite thoughts ('assertibles') 'Socrates's-being-ill' and 'Socrates's-being-not-ill'; when it asserts the former or denies the latter, it will have the truth; when it asserts the latter or denies the former, it will be in error (1012a3-5).<sup>211</sup> Thus the actual process of thought confirms the validity of LEM.

The fourth argument (1012a5-9) bears on the problem surrounding the vague, indeterminate identity of the 'thing' in between truth and falsehood, and between being (the case) and not-being (the case) as well, which must be postulated by the opponents of LEM (unless one is merely arguing for the sake of argument, Aristotle significantly adds; a6). This would imply (a) that it will be possible for

<sup>209</sup> For the decisive role of the *qua*-functor in Aristotle's strategy of argument see my sections 2.71-2.76.

<sup>210</sup> Ross rightly remarks (I, 285) that *διάνοια* and *νοῦς* are sometimes used interchangeably, e.g. *An.* II 3, 414b18 and *APo.* I 33, 89b7; sometimes *νοῦς* appears as one of the *ἔξεις* of *διάνοια*, e.g. *APo.* II 19, 100b6. In the first sense either term is used for the whole intellectual faculty, in the second *διάνοια* is specialized so as to note discursive, and *νοῦς* so as to denote intuitive thought. It is probable that in this context Aristotle uses the words *διανοητόν* and *νοητόν* in the second sense.

<sup>211</sup> For *ἀπόφανσις* as the mental choice between 'yes, it is so' and 'no, it is not' see Plato, *Theaet.* 189D7-E3, and De Rijk (1986), 296 (and the note thereto), and 368, n. 26; also my section 2.21.



a man in asserting something to neither say the truth nor fail to do so; and, accordingly, (b) that the object of our speech might be something apart from that which is (the case) and that which is not (the case), and that there will be a kind of substantial change, apart from the well known process of coming to be and passing away. Apparently Aristotle censures the indeterminateness of this intermediate ‘thing’, which can only baffle us in a discussion.

The next objection (1012a9-12) merely modifies the previous one by applying it to the standard lore of number, which, by definition,<sup>212</sup> does not admit of something intermediate between odd and not-odd (‘even’). That Aristotle refers to the definition of ‘odd’ (περιττός) — such as implied in *Cat.* 10, 12a6-8<sup>213</sup> — is both understandable and worthwhile. Of course, his view (in fact the common Greek view) of number rules out the use of ‘number’ for fractions as well as imaginary numbers. This may explain the stringency assigned by Aristotle to his objection, which in fact only holds for the theory of integers. In point of fact, a fraction, such as  $2\frac{1}{2}$ , can be taken as ‘neither odd nor even’. However, Kirwan’s remark (120) that Aristotle’s argument begs the question does not stand up in the context of Greek arithmetics as commonly held by Aristotle and his opponents. Also one should take into consideration what has been observed at the outset on account of the status of LEM, to the effect that it is only valid for, and indeed even constitutive of, a system of two-valued logic.

The sixth argument (1012a12-15) plays on the well-known Greek *horror infiniti*. Whoever rejects LEM is bound to assume an infinity of particular<sup>214</sup> ontic states (entities or states of affairs) in the middle of ‘being (the case)’ and ‘not being (the case)’; for if, apart from ‘[x]-being-F’ and ‘[x]-not-being-F’, there is some state ‘[x]-neither-being-

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<sup>212</sup> Originally Greek ἀριθμός was used to designate a term or item of a series of things (hence in Greek — and in Latin as well — ‘one’ is not a number, but the principle of numbering and counting). It apparently was regarded as an entity serving for counting things; cf. Aristotle’s descriptions and paraphrases in several places in *Phys.* and *Met.* mentioned by Bonitz *Index*, 94a7-12. I take the basic sense of ἀριθμός (as Latin ‘numerus’) to be ‘series’, ‘sequence’; see my sections 12.32-12.35.

<sup>213</sup> “Odd and even are said of number, and it is indeed necessary for one or the other to fall to number, either odd or even.” Cf. *APo.* I 4, 73a39.

<sup>214</sup> It should be recalled time and again that the discussion always is about particular instances [x], [y] etc., so that the contradiction of ‘[x]’s-not-being-F’ is verified if, and only if, [x]’s-being-F’ is the case, not if [x] does not exist, because the particular [x]’s actual existence is implied.

nor-not-being-F', then, when it comes to negating the latter state-description, inevitably some third state-description would come into view which as an intermediate is neither the latter one nor its contradictory, and so on to infinity ; and each time this intermediate state will be some distinct 'thing', "for its being differs from the previous one", Aristotle declares (a14-15).

The final argument (1012a15-17), which bears on the nature of the negation, argues that there is no room for any intermediate between saying 'yes' and saying 'no', nor, accordingly, between a 'yes-state-of-affairs' and a 'no-state-of-affairs'. For a negation merely expresses the absence of some definite state of affairs (whether positive or negative, such as (a) '[x]'s-being-pale' or (b) '[x]'s-not-being-pale') so that whenever (a) is negated, the alleged intermediate will coincide with (b), and the other way round. The Greek text presumably contains a textual deficiency. Let us begin with the first part of the sentence, which does not pose difficulties:

*Met.* Γ 7, 1012a15-16: Again, when someone, asked whether something is pale, says that it is not (the case), he has denied nothing other than its being (the case) [...].

So far, so good. But then comes a somewhat terse sentence in our manuscripts: ἀπόφασις δὲ τὸ μὴ εἶναι, which has commonly (Ross, Tredennick, Kirwan) been given an unsatisfactory rendering: "and its not being is a negation". This much is sure (see the comments by Ross and Kirwan *ad loc.*), Aristotle intends to make clear that the negation merely indicates that some state of affairs *is not* the case, and does not go so far as to affirm that some other thing, e.g. the alleged intermediate, *is* the case. Therefore the text as it stands is better rendered, I presume: "for the negation concerns non-being <only>".<sup>215</sup> An easy emendation of the text could be effected by reading: ἀπόφασις δὲ ἐστὶν ἀπόφανσις τοῦ μὴ εἶναι, which is strongly supported by the definition of ἀπόφασις given in *Int.* 6, 17a25-26.<sup>216</sup> On this reading, the final sentence runs:

*Ibid.* 7, 1012a16-17: [...] for the negation is the account of something's not-being the case.

<sup>215</sup> Reale (I, 317) correctly has: "la negazione significa infatti non-essere". For the frequent omission of the notion 'only' in Greek see Verdenius (1981), 348; 351.

<sup>216</sup> Ἀπόφασις δὲ ἐστὶν ἀπόφανσις τινὸς ἀπὸ τινός. ("A negation is an account denying something of something").

7. 92 *Two additional remarks (1012a17-28)*

The seventh chapter winds up with two additional remarks. The first (1012a17-21) is about the psychological attitude of people who are simple-minded enough to have recourse to positions such as the rejection of LEM, in order to get rid of paradoxical opinions. Unable to resolve captious arguments, they give in to the pleadings of bamboozlers, who ostensibly disprove both a thesis and its very contradictory — doing what Socrates's slanderers accused him of, “to make the weaker argument the stronger”.<sup>217</sup> In such circumstances surely the anti-LEM thesis of ‘neither true nor false’ seems to bring relief. Aristotle (1012a21-24) goes on to offer an effective remedy against the malady by recalling his previous<sup>218</sup> (1006a31-b34) recommendation to take advantage of the necessity of a fixed meaning for any term used in a dispute. In response to all these people the first step to be taken, therefore, is to define the things brought up for discussion. Definition, as it happens, arises from the necessity that disputants should say something significative. Now the account of that of which<sup>219</sup> the name used is a sign will be the definiendum required for an orderly discussion.

The other remark is a historical reflection. As Ross (I, 287) has rightly observed, Aristotle concludes his discussion of LEM by pointing out that while the doctrine of Heraclitus, that everything *is* and *is not*, makes everything true, Anaxagoras's doctrine, to the effect that there is, apart from ‘true’ and ‘false’ something in the middle of contradictory states of affairs, in fact makes everything false; for when things, as Anaxagoras claims, are mixed, the mixture is neither something genuine nor not-genuine, so that there is nothing true to be said.

7. 93 *On some erroneous views about things*

The concluding chapter assesses the foregoing discussions about the main laws governing any philosophical dispute (LNC and LEM),

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<sup>217</sup> Plato, *Apology*, 18B10; 19B5; 23D5.

<sup>218</sup> See 1006a31-b34 discussed above. In the next chapter (1012b5-8) the same process is advocated.

<sup>219</sup> Rather than “the account of which”; the usual translations (Ross, Tredennick, Kirwan) all fail to allow for the omission of the preceding indefinite determinative pronoun (οὗ = τοῦτου οὗ). This construction (called ‘contraction’) is frequently found in Greek.

including that concerning metaphysics, in the general framework of the investigation about the true nature of things. In view of the analysis made, Aristotle argues (1012a29-b4), it is patently clear that the theses some people bring forward on account of single phenomena, as well as the sweeping ones about all and everything, cannot hold good, no matter whether they maintain that nothing is true, or that everything is true. The chapter inevitably contains some echoes from the previous ones.<sup>220</sup>

Small wonder that with respect to the phrases ‘being true’ and ‘being false’, the same corrective process is consulted and put into practice (1012b5-22) as was used several times before, especially at 4, 1006a18ff.:

*Met.* Γ 8, 1012b5-13: In response to all such theses the right thing [...] is not to postulate of something that it is or is not, but that <its name> signifies something<sup>221</sup>. This makes it possible to have a discussion based on a definition, viz. taking hold of what the terms ‘falsehood’ and ‘truth’ mean. Now, if to assert what is true is nothing other than to deny what is false, it is impossible that *everything* should be false, for it is necessary that one member of the contradiction should be true. Again, if it is necessary with respect to everything either to assert or to deny it<sup>222</sup> it is impossible that both of the two should be false; for it is *one* member of the contradiction that is the false side.

Our conclusion must be, Aristotle (1012b13-22) claims, quite in line with his previous elenctical observations, that all such theses notoriously are self-destructive. For anyone who says that everything is true, *eo ipso* makes the opposite thesis true, which precisely claims his to be false; and he who says that everybody is speaking falsely, *eo ipso* asserts this of himself; and so on.

Next in order Aristotle opens fire on the most famous philosophical theses about the nature of things. So both the Parmenidean (Zenonian), that all things are at rest, and the Heraclitean, that all things are unstable, call for adequate counter-arguments. As Ross has pointed out, Alexander told us that this section (1012b22-31) was omitted in some manuscripts — not in any of those handed down to

<sup>220</sup> E.g. the reference to Heraclitus, including its justification at 1012a34-b2 (cf. 1008a4-7), and the remark (at 1012b4) about the more likely possibility of everything being false than being true.

<sup>221</sup> The usual translations — “that something has a meaning” (Ross), “that something signifies” — do not hit the mark, let alone Tredennick’s “(we must demand) some significant statement”.

<sup>222</sup> As may be taken for granted, in view of the fact that in any dispute there is a vital difference between ‘yes’ and ‘no’.

us, for that matter — as it was more appropriate to physics than to metaphysics. Ross is right in discarding Alexander's suspicion as unfounded. In point of fact, these theses have a strong metaphysical impact, and their being brought up (together with other theories of physics) in the introductory book of *Met.* (A 2-5) need not to raise suspicion either.

The Parmenidean view is countered by considering the *mere fact*<sup>223</sup> of some person forwarding this thesis at a certain time. Of *this fact* ('state of affairs') you have to agree that it turns out to be subject to change, because the speaker himself at one time was not in existence, and again will not be.

The Heraclitean doctrine does not stand up to our criticism either. This is shown in two steps. (a) If it were true, nothing would be firmly the case, and so everything would be false, which has already (esp. 5, 1010a7ff.) been proved to be impossible; (b) there must be something stable, because that which *is* — as an underlying element, that is — changes, for change is from something into something.<sup>224</sup>

The concluding remark of the chapter concerns the two doctrines alike. It aims to get even with a more cautious expression of these doctrines, to the effect that everything is at rest or moving *sometimes*, and nothing *always*. However, this is at odds with the established fact that there is something that is always moving the things that are in change — i.e. the First Heaven or sphere of the fixed stars, which is continuously moving the whole physical universe, being itself in permanent movement — and, on the other hand, God, the Prime Mover, being itself unmoved.

### 7.94 *Recapitulation*

The upshot of book Γ deserves our attention in many respects. Firstly, this book takes up the discussion about the unity of metaphysics and its scope and shows that this primary discipline deals with both 'what *is*' qua being and also the domain of 'what *is*' *par excellence* —

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<sup>223</sup> Kirwan (121) fails to see that at 1012b25 τοῦτο stands for the actual fact of something being asserted, not the truth-value of the assertion.

<sup>224</sup> For this argument see 1010a18-22 above. Again, Kirwan seems to miss the point in saying that the argument fails to show that the time at which [x] is F and that at which it is G are stretches of time. The only thing Aristotle wishes to make clear is that when F[x] alters into G[x], [x] itself must be the stable element, because otherwise our saying that [x] is involved in change would be an empty noise.

Changeless Being (our 7.32). Apart from this, it contains many clues for getting a grip on Aristotle's method and strategy of argument, in particular the devices of focalization and categorization (7.4).

The greater part of  $\Gamma$  is devoted to an extensive discussion of the law of non-contradiction (LNC) and, in its wake, there is also a short discussion of its counterpart, the law of excluded middle (LEM); my section 7.5. In this context Aristotle's use of elenctical proof is of major importance, since it skilfully fills a gap in the argumentative procedure, once it has been stated that LNC and LEM are not susceptible to any kind of epistemonical proof (7.7; 7.71-7.78; 7.8). In  $\Gamma$  6 some more information is found about Aristotle's strategy.

Aristotle's semantic expositions about his use of ὄνομα, λέγειν τι, and τὸ ἐν σημαίνειν (7.71-7.72) have turned out to be of decisive weight for our understanding of his strategy of argument. Contrary to the usual interpretations, I have argued for the validity of Aristotle's arguments (7.7-7.9).

Finally, in his discussion of the Protagorean doctrine, Aristotle dwells on the relationship between 'real thing' and 'thing perceived', the distinction between which was ignored and even flatly denied by the followers of Protagoras, including the opponents of LNC and LEM (7.72-7.73).

## CHAPTER EIGHT

### THE PROPER SUBJECT OF METAPHYSICS

After the intermezzo (Γ 3, 1005b8-1012b31) dealing with the two laws governing any discussion, including discussion of metaphysical subjects, Aristotle now returns to the main issue he was examining in the first part of Book Γ (1, 1003a21-1005b8), viz. the nature and scope of the discipline of metaphysics. There is a plausible reason to assume, with Jaeger (1923, 209-11), that E, chs. 2-4, are a later addition meant to bridge the gulf between the introductory part of *Met.* (ABΓE1) and its substantial parts, ZHΘ. As a matter of fact, the opening lines of Z refer, for the list of categories, not to E 2, 1026a35-b1, but to Δ 7, 1017a24-27. As it now stands, the book aims to give, in the first chapter, a more detailed outline of the nature and scope of metaphysics by opposing metaphysics to the two other theoretical disciplines, physics and mathematics, and to show that only metaphysics studies being as such. Next it sets out to discard two other domains of being, — viz. coincidental being (chs. 2-3) and being as truth (ch. 4) — which at first glance seem to fall within the proper scope of metaphysics as well, but cannot pass closer scrutiny.<sup>1</sup>

#### 8.1 *The assessment of metaphysics among the theoretical disciplines*

Chapter E 1 has always raised some tantalizing questions for interpreters. The main problem is whether, unlike physics and mathematics, metaphysics is really a non-particular ('universal') study of all things-that-are, as is claimed in the opening paragraph of the chapter. In other words, does metaphysics amount to what has been called in modern times 'metaphysica generalis', or is it more like the other disciplines with their proper subjects, having, as 'metaphysica specialis', a proper domain of its own, the Changeless Substances, as we are told in the final paragraph of that chapter? The contradistinction of

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<sup>1</sup> Kahn (1985, 338) offers the proposal ("plausible and nothing more") to take *Met.* Λ to be very early, ZHΘ relatively early, and Γ-E as relatively late (his arguments are found in 333ff.).

metaphysics to physics and mathematics seems to be further blurred by the seeming claim of metaphysics that it accomplishes something the other disciplines are not able to do, not even with respect to their proper subjects, viz. to yield an ἀπόδειξις of the οὐσία of the several objects studied by the others. As has been pointed out, this claim may seem somewhat hollow if ἀπόδειξις is taken in its strict sense, at least if this sense is opposed to “some other manner of clarification” (1025b15-16). Both Ross (I, 351f.) and Kirwan (183f.) are of the opinion that Aristotle is inconsistent, or at least “can hardly be said to have stood firm by the intention with which he evidently begins the chapter” (Ross). In my comments on these questions an attempt will be made to show that in this case too Aristotle demonstrates a lot more doctrinal coherence than is commonly recognized.

Aristotle starts the discussion by illuminating the distinctive feature of metaphysics which comes to the fore in its accomplishing the main task it shares with the other disciplines — to seek the origins and the causes of the things-that-are (τὰ ὄντα). Unlike the other disciplines, metaphysics seeks the origins and causes of the things precisely *qua* things-that-are (τῇ ὄντα), while the others examine them in their being so-and-so qualified. Thus the latter are concerned with a particular being, i.e. a particular γένος. The use of the word γένος is crucial, it would seem. As often in Aristotle, the term is used here with both an intensional and an extensional connotation at the same time, meaning, that is, ‘kind’ both in the sense of ‘ontic feature’ or ‘form’ and of ‘class of beings’, viz of the things possessing that feature.<sup>2</sup> As is plain, the two meanings are correlated to the extent that the comprehension (or intension) of a concept, being the sum of its constitutive notions, is inversely proportionate to its extension. Thus the discipline that studies the things-that-are *as such* has a wider extension than e.g. the one that only examines them *qua* being subject to change, viz. physics.

Things are quite clear so far. However, as a result of the associated connotations of extension and intension, the notion of the (extensional) universality of metaphysics is linked up with the idea that within the large domain of its subjects, there are some that possess

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<sup>2</sup> The intensional aspect is found in e.g. *Met.* Δ 28, 1024a36-b11; Z 7, 1033a4; *Top.* I 5, 102a31; VI 1, 139a29; VI 3, 140a27; VI 5, 142b27, 143a18 and 36; VI 6, 144a25. For the more frequent extensional use see Bonitz, *Index*, 150b-152a. This double aspect of what is signified by the term γένος should be viewed in the broader context of semantic ambivalence. See my sections 1.71-1.72.



the distinctive feature of ‘pure(ly) being’ to the highest degree, viz. the Changeless Being, which *is par excellence*. That is why, like the special disciplines, metaphysics too has its special domain. As a matter of fact, it is its studying this pre-eminent domain of Being that yields metaphysics its superiority over physics, as will appear in the concluding paragraph of the chapter.<sup>3</sup>

As to the additional question mentioned above concerning the specific *modus procedendi* of metaphysics, let us first allow our author to be his own mouth-piece:

*Met.* E 1, 1025b10-18: Nor do they [i.e. the other disciplines] offer any discussion of the what-it-is (τοῦ τί ἐστίν) <of their subject>; but starting from that — some making it plain to the senses, others assuming the what-it-is as a hypothesis — they proceed from that to demonstrate, either more or less rigorously, the things that hold good of the kind (τῷ γένει) [ontic feature/class] under discussion in its own right. It is plain, therefore, that on the basis of such an approach<sup>4</sup> there is no disclosure of beingness (οὐσίας), i.e. of what-a-thing is, but only some other manner of clarification (δηλώσεως). Similarly, nothing is said <expressis verbis> either as to whether the ontic feature (γένος) they are concerned with ‘is’ or ‘is not’, because the clarification of *what* -a-thing-is and *that*-it-is falls to the same intellectual process (τῆς αὐτῆς διανοίας) [i.e. immediate apprehension].<sup>5</sup>

Both Ross (I, 351f.) and Kirwan (183f.) seem to incur a lot of difficulty by reading too much into the text as it stands. For one thing, Aristotle does not contend (as they think he does) that metaphysics is able to present a strict ἀπόδειξις of the definition of its

<sup>3</sup> Aristotle’s ambivalent view of the status of metaphysics is dealt with extensively by Routila (1969). Throughout the development of Aristotelianism it has kept the controversy ‘either universal or special?’ very much alive in Late Antiquity and the Middle Ages, both in the Latin West and the Greek and Arab world. See Zimmermann (<sup>2</sup>1998), *passim*. From Christian Wolff (1679-1754) onwards, the division of metaphysics into ‘metaphysica generalis’ (= ‘ontology’) and ‘metaphysica specialis’ is found.

<sup>4</sup> *Pace* Ross and Kirwan, the word ἐπαγωγή here has the general sense of approach (*lit.* ‘adduction of things’), rather than the usual ‘induction’ as opposed to syllogism, enthymeme, and example; my sections 2.53-2.55.

<sup>5</sup> Where Upton (1991, 114) claims that this passage “suggests that if-it-is questions are not only operative at scientific and pre-scientific levels but are ultimately asked and answered at the level of metaphysical analysis”, he is in principle right, but has no good reason for taking this as support for his thesis (102; 114) that Aristotle has the habit of ‘conflating’ or ‘blurring’ the εἰ ἐστὶ and ὅτι ἔστι questions. Their practical coincidence is a natural consequence of one of the basic tenets of Aristotelian philosophy that any instantiation of a mode of being always extensionally (or referentially) coincides with its instance. My sections 6.51; 6.87; 9.61; 10.71.

subject matter; if he did, this would be at odds with the doctrine of *APo.*<sup>6</sup> He only wishes to say that, proceeding in the way the other disciplines do in this respect, one should expect only more or less rigorous ‘demonstrations’ or ‘explanations’. What is implied in Aristotle’s words is that metaphysics deals with the being-ness of its subjects. As to the looser meaning of ἀπόδειξις and the cognate ἀποδείκνυναι, a first glance at Bonitz’s *Index* suffices to see that in Aristotelian usage too the word ἀπόδειξις is not only used in the strict sense advocated in *Posterior Analytics*.

To lay too much emphasis — as is frequently done — on the wording of the last sentence, in which it is said that the other disciplines omit the question of whether the kind with which they deal “is or is not”, is not reasonable either. Of course, the author does not mean to say that the students of the other disciplines keep their hearers dangling concerning the existence of the specific ontic feature present in the object under discussion, let alone that, quite masochistically as it would be, they would leave them in suspense as to the existence of the class of objects they are especially interested in. What Aristotle does contend is that, unlike metaphysics, the other disciplines do not discuss the presence of the specific way of being- (ness) in the object of their study, because, as far as they are concerned, this is *in confesso*. The insignificance of the question is given some relief by the author’s employment of the polar manner of expression εἰ ἔστιν ἢ μὴ ἔστι (“whether it *is* or *is not*”).<sup>7</sup>

The remaining part of the chapter aims at further outlining the nature and scope of metaphysics by contradistinguishing them from those of the other theoretical disciplines, physics and mathematics. Again, what they have in common over and against the practical and productive disciplines,<sup>8</sup> viz. their being theoretical, is not what is in question, but their different formal objects. Aristotle’s strategy of argument is to exhibit, and play down by the same token, the

<sup>6</sup> My sections 6.55-6.57.

<sup>7</sup> The polar manner of expression is used in Greek to sweepingly indicate that the term used does not allow any exception, not even by including its opposite. A famous example is found in Sophocles, *Antigone* 1109, where Creon summons the present servants to obey his orders, addressing them with the words οἱ τ’ ὄντες οἱ τ’ ἀπόντες (“Come, come, my servants, present and absent”). There is a similar use of polar expression in his *Electra*, 305-306: τὰς οὔσας τέ μου καὶ τὰς ἀπούσας ἐλπίδας διέφθορεν, i.e. “He has destroyed the hopes I had and those I had not”. Cfr. Xenophon, *Cyropaedia* VIII 7, 28: “And to all of you, my friends, both present and absent, I bid farewell”. See Kühner-Gerth II, 587f. Cf. Van Raalte (1993), 299.

<sup>8</sup> The division of disciplines is nicely clarified by Ross (I, 353).

credentials of physics, when it comes to making the latter qualify for being the highest discipline:

*Ibid.* 1, 1025b18-21 and 25-29: But since physics is one of the disciplines dealing with a particular kind of thing-that-is (γένος τι τοῦ ὄντος) — for it deals with the sort of ousia which possesses the principle of its movement and rest present in itself — it is plain that it is neither practical nor productive. [...]. It follows that [...] the thinking concerned with nature must be of the theoretical kind, but will theorize about such of the things-that-are as are capable of being changed, and about ousia as defined, taken for the most part as not separable from matter.<sup>9</sup>

Aristotle (1025b28-1026a4) proceeds to elaborate the notion of ‘without matter’ from the semantic point of view, by explaining “the mode of being of a thing’s what-it-is qua being phrased in its definiens” (τὸ τί ἦν εἶναι καὶ τὸν λόγον πῶς), i.e. what is the semantic basis of the abstraction from matter as applied in a metaphysical inquiry, “since the inquiry will get nowhere otherwise”, as he significantly adds.

There is a lot of confusion about this section among the interpreters. For the most part they fail to make clear that what is under consideration is what I have labelled earlier ‘quidditative categorization’.<sup>10</sup> The purport of this passage is to elucidate the diverse semantic ways in which different significative words operate. Some perform as the word σιμόν does, others as κοῖλον does, meaning that some words, even though they only signify a property or form, always, or most of the time, semantically include the fixed subject informed by this form, while others do not.<sup>11</sup> Aristotle’s favourite example for illustrating the first case concerns the phenomenon of the snub nose, which is a nose that is short and curved (‘turned up’) at the tip. Like the English word ‘snub’, the Greek σιμός in its substantivated neuter form (σιμόν) without anything added, is used to stand for the nose just described. Aristotle expresses this by saying that this word is “bound up with matter”, its substrate, that is. Once he hears the word σιμόν, the hearer cannot fail to think of a curved (concave) nose, whereas whoever is not familiar with Greek, and is only told that the adjective noun σιμός means ‘curved’, misses the point, by assuming that σιμόν stands for any curved thing whatsoever.

<sup>9</sup> E.g. the soul is an ousia which can be separated from matter; cf. 1026a5-6.

<sup>10</sup> Cleary’s (1995, 424ff.) comments on *Met. Z* 1 (and cognate chapters) are quite to the point.

<sup>11</sup> Semantic Main Rule RSC; my section 1.71.

Words of the second type, on the other hand, signify properties or forms that may fall to any subject, so that if they are used in the substantivated form, the hearer is not *eo ipso* informed about the thing meant by the word. For instance, the word κοῖλος means ‘curved’, ‘hollow’, ‘concave’ etc., and is indiscriminately used to stand for a property belonging to quite different things, such as a ship, a boot, a bed, a hand, a river, a valley, a way, and so on; but it is never in its substantivated form used exclusively for one of them. Therefore even when it is used in its substantivated form, the word κοῖλος (κοῖλον) does not tell us what thing (substrate) is spoken of. In Aristotle’s words, “the phrase ‘being κοῖλος’ is without perceptible matter”, and, accordingly, is perfectly understood as being subtracted from the (various) substrates in which it may be enmattered.

The question now is whether all physical terms are of the σιμός type. The answer is in the affirmative, since the significates and definienda conveyed by physical terms all concern quiddities *qua enmattered*. This even holds good of some aspects of the soul which, as far as they are bound up with matter, are in the province of the physicist. Aristotle is of the opinion that this feature, which is common to all the objects falling under natural philosophy, is bound to weaken the claim of physics to be the highest discipline:

*Ibid.* 1, 1025b30-1026a6: Among the quiddities grasped by defining things, some apply in the manner in which the word ‘snub’ does, others are like the word ‘curved’; and the difference between these is that ‘snub’ is bound up with matter — for the snub is a curved *nose* — whereas ‘being-curved’ is taken without perceptible matter. So since all natural things are brought up in the same way as the snub, as for instance nose, eye, face, flesh, bone, and, in general, animal; and leaf, root, bark, and, in general, plant — for the definiendum of none of them is free from the notion of changeability but always includes matter — the manner in which we must seek and define what a thing is, in the case of natural things, is plain. And that is why it falls to the student of nature also to study a certain kind of soul, namely any one that is not free from matter.

It is plain from the foregoing lines that physics too operates with quiddities abstracted from the (changeable) things it studies. Physics is different from metaphysics in that it studies the quiddities of the material things *qua enmattered*, i.e. the natural philosopher continuously takes into consideration that those quiddities are always “bound up with matter”, invested, that is, with material conditions. It is useful in this context to consider the common rendering (Ross, Tricot,

Tredennick, Kirwan) of 1025b33-34: “whereas concavity is *independent* (italics mine) of perceptible matter”. Such renderings are unsatisfactory in that they seem to make Aristotle a Platonist. In fact, the κοιλότης is the *immanent* property of ‘being concave’, rather than ‘concavity’, with its connotation of transcendence (which is also insinuated by the phrase ‘independent of matter’). For Aristotle, even formal abstraction does not imply that a thing is independent of material conditions; it actually leaves this out of consideration in order to zoom in on the essence as such, apart from its actual inherence in matter. In point of fact, this is the first passage in the *Metaphysics* that alludes to the possibility of a definiens including a thing’s material constitution, which will eventually turn out to be pivotal for identifying the true ousia.<sup>12</sup>

The decisive point in the present discussion is that, unlike metaphysics, the proper objects of physics are always examined *qua* enmattered, or, more precisely, things, when taken by the natural philosopher as his own proper object, are still examined in their capacity of being enmattered. Putting it from the semantic point of view, even though the significates of the terms used to designate physical objects do not include the object’s individual parcels of matter, they always include the thing’s material constitution or ‘condition of materiality’.<sup>13</sup>

Finally, the semantic observations made in the previous paragraph will prove to be of paramount importance for the search of true substance in *Z*, chs. 2-6, where the semantic impact of the use of substantival nouns and substantivated adjectival nouns is submitted to scrutiny.<sup>14</sup>

The position of metaphysics is further investigated by Aristotle in putting the credentials of mathematics to the test (1026a6-16). One has to agree that mathematics too is a theoretical discipline. In addition — unlike the objects of physics, which are “separable<sup>15</sup>, but not

<sup>12</sup> The two kinds of definiens are dealt with in my sections 6.55-6.57.

<sup>13</sup> The diverse ways of abstraction involved were later called ‘abstractio totalis’ and ‘abstractio formalis’, and correspond to the different abstracta as found in physics and metaphysics, respectively. — Elaborating on the idea of taking things in diverse ways according to their sensible matter (or material constitution, respectively) being abstracted later led to the *unAristotelian*, Neo-Thomist doctrine of the three degrees of abstraction. All these bear on the formal significate.

<sup>14</sup> For the role of ‘quidditative categorization’ in epistemonik proof see my section 2.7.

<sup>15</sup> Schwegler’s emendation χωριστά for the manuscripts reading ἀχώριστα seems to be required by the logical balance of the sentence (“... , but ...”). This word

changeless" — those of mathematics, at least some of its branches, are studied qua changeless and qua separable.<sup>16</sup> However, this discipline does not seem to stand a better chance than metaphysics of being the highest discipline:

*Ibid.* 1, 1026a10-18: However, if there is something everlasting and changeless and separable, clearly it is the task of a theoretical discipline to discover it, not, however, of the study of nature (which deals with certain changeable things) nor indeed of mathematics, but of some discipline prior to both. For the study of nature deals with things that are separable but not changeless, and certain parts of mathematics deal with things which, though changeless, are doubtless not separable, but *qua* enmattered, while the primary discipline will deal also with things separable and changeless. It is true, all causes must be everlasting, but especially these, for they are the causes that operate on as much of the things divine as are perceptible.<sup>17</sup>

The last paragraph (1026a23-32) presents the solution to the problem of the alleged universality of metaphysics. I have already drawn attention to the two semantic aspects of the word γένος (or 'kind') when used with respect to metaphysics: 'ontic feature' and 'class' — the first (viz. 'that which is qua thing that is') connoting its universality as it covers *all that is*, the latter connoting its being particularly concerned with the class of highest beings, because its formal object 'what is qua what is' is pre-eminently realized in them. Aristotle has good reason to bring the second aspect to the fore, because it is precisely metaphysics' concern with the highest, unchanging being that rules out the other claimants, physics and mathematics; physics, because it only deals with "substances constituted naturally" (a28),

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must mean 'separate' in the sense of 'being on its own', 'not-inhering in something else' or 'being a τόδε τι'. For this sense see e.g. *Met.* Z 3, 1029a27-28 (and Cleary, 1995, 294); Bonitz, *Index* 860 a27-32. Compare the use of κεχωρισμέμον, which conveys subsistence and self-containedness, e.g. at *Met.* M 2, 1077b2-11 (my section 11.52). For the many defenders of the MSS reading see Cleary (1995), 430, n. 21. Apelt, for instance, defended (1891, 231) the traditional reading by arguing for a different contrast in this passage between the objects of first philosophy (separate and unchanging) and those of physics (inseparable and changing) together with those of mathematics (unchanging but not separable). Whoever follows this line of interpretation should take the conjunction ἀλλά here not to be used adversatively (which is possible; see Denniston, *s.v.*), and ἀχώριστα in its logical sense.

<sup>16</sup> At *Met.* Z 3, 1029a14-18, it is recognized that geometrical properties are the last to be stripped off ('subtracted') from things. But the 'extensionality' or 'dimensionality' of mathematical entities still prevents mathematics from being the highest discipline.

<sup>17</sup> God, who moves the sphere of the fixed stars, and the celestial spheres that cause the movement of the heavenly bodies, are intended. Cf. *Met.* A 7, 1072a19-1073b3, *Phys.* II 4, 196a33 and *EN* VI 7, 1141a34-b3.

and mathematics, since it studies things, though abstracted, yet qua occurring enmattered.

In his paper on the intended interpretation of Aristotle's metaphysics, Kahn (1985, 312) considers Aristotle's solution to the aporia: 'Is First Philosophy a universal discipline or does it have a single γένος and a particular nature as its object?' "as puzzling as any passage in Aristotle". He assumes that the explanation of the cryptic phrase 'universal because first' must have something to do with the causal role of the Prime Mover, which "as first of all things is mover of all things" (*Met.* Λ 4, 1070b34-35). Kahn (313f.) is of the opinion that the assumption that Aristotle has an eye on the different *formal* (Kahn has 'intensional') objects of the diverse disciplines will not do, and that we have to think of a distinct γένος or type of object (315). Kahn fails to make clear, however, how to solve the *interpreter's* aporia that by οὐσία ἀκίνητος the Prime Mover alone must be understood; and at the same time it is clear that the metaphysics of the sublunar world as actually presented in, say, ΖΗΘ should be unthinkable if there were not a Prime Mover. To my mind, this (*our*) aporia will vanish if we take the unchanging οὐσία no longer extensionally to be a distinct γένος, but formally as the enmattered οὐσία ('beingness') qua universally applicable and eternal in this respect.<sup>18</sup>

The obvious conclusion, then, is the same as the previous outcome (Γ 1, 1003a21ff.): that the discipline we have been looking for from the outset is the one that studies that-which-is as such (τὸ ὄν ἢ ὅν). The different senses of this key term, which were already distinguished before (Γ 2, 1003a33-b10; cf. the Lexicon Δ 7),<sup>19</sup> now quite naturally come up for discussion. What Aristotle is particularly looking for from now on is entities which *are* in a special, privileged sense. Along this line of thought, Aristotle's τὸ ὄν ἢ ὅν becomes a comprehensible device in his search for 'true Being'. It will now be necessary to remove two of the four senses which are inappropriate.

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<sup>18</sup> On the 'discipline-bound' approach, the remarkable fact that the basic proof of the existence of 'unchanging ousia' in the sense of Prime Mover is presented in the *Physics* as part of the account of the ἀρχαί of motion (see Kahn 1985, 316) suggests that throughout the diverse disciplines it is not the objects as such which are constitutive of a discipline, but the diverse ('formal') ways in which we address them.

<sup>19</sup> Book Δ of the *Metaphysics* is a lexicon in which Aristotle is listing and analysing meanings of key words in philosophical use, rather than offering a complete inventory of the meanings of these words in ordinary Greek.

8. 2 *Two of the four senses of 'what is' should be cast aside*

To begin with, we must assess Aristotle's discussion of the fourfold division of senses of 'be' (εἶναι) in the framework of the introductory books of the *Metaphysics* (A-Δ). Having arrived at the firm conviction that metaphysics studies all the beings there are, the next step will be to examine all those things whatsoever which may present themselves to us and be brought up for discussion qua 'be-ing' in some way. However, a real difficulty is lurking here: for our search for 'be-ing' as the proper object of metaphysics can be jeopardized by our failing to discover the specific sense in which the term 'what is' is primarily used. Therefore the removal of the secondary senses of 'what is' is a matter of necessity, despite the fact that those senses too concern genuine modes of 'be-ing'. In Aristotle's own words (E 2, 1026a33), those senses all bear on τὸ ὄν ἀπλῶς λεγόμενον ('what is' properly said), all of which are said "not homonymously, but with reference to one thing, i.e. one particular nature" (Γ 2, 1003a33-34).

The four main senses of 'being' are examined at length in the subsequent books of the *Metaphysics*. In E, chs. 2-3 'what is coincidentally' (τὸ ὄν τὸ κατὰ συμβεβηκός) is discussed, in E 4 and Θ 10 'what is qua being true' (τὸ ὡς ἀληθὲς ὄν), while 'what is in its own right' (τὸ ὄν καθ'αυτό) is examined in the most important section of the *Metaphysics* (Z and H), and 'what is potentially' (τὸ δυνάμει ὄν) and its counterpart, 'what is in actuality' (τὸ ἐνεργείᾳ or ἐντελεχείᾳ ὄν) are looked into in Θ, chs. 1-9.

8. 21 *The differentiation of 'what is' (τὸ ὄν)*

Aristotle's ontology is characterized by the idea that the phrase 'what-is' (τὸ ὄν) is used in several ways, or, putting it otherwise, that there are different grounds on which we assign 'be-ing' to things. In the *Metaphysics* there are two distinct lines of thought along which Aristotle diversifies the basic notion of being.

In Book Γ 2, where the unity of the discipline of metaphysics is at stake, the author intends to show that this unity is not jeopardized at all by the fact that the notion of 'being' has more than one sense, because all senses it has are said with reference to what Owen (1965) has called 'one focal meaning'. From this point of view, the notion of 'being' divides into kinds that are all analogically related to 'substance' ('subsistent entity'; ousia). Some things are called 'things-



that-are' because they are themselves οὐσίαι in the privileged sense ('substances'); some because they are affections of an ousia; some because they are a route to it, or destructions, or lacks, or qualities, or productive, or generative of it or of things called with reference to it — or even denials of one of these mentioned above, or of a substance.<sup>20</sup> Thus any idea of equivocity is ruled out and the unity of the discipline's central object safeguarded and, consequently, the unity of the discipline itself.

The other division of the notion of 'being', which is found in Δ 7 and E 2, is brought up in quite a different doctrinal or didactic context. In the latter chapter, Aristotle is clearing the ground for his search for 'true Being' (which is going to be undertaken in the next book, Z), by ruling out all those uses of the term 'being' which are improper ones and could easily lead us astray in our seeking true Being. With this end in view Aristotle this time focusses on the distinct ways in which we can assign 'being-ness' to things whenever they are called up under the aspect of 'be-ing somehow'.

In Δ 7 Aristotle's expositions about the notion of be-ing are presented from the didactic point of view, as may be expected from the lexicographical overview Book Δ actually is. Aristotle's account is commonly held to be extremely obscure, and indeed, to the modern interpreter, the composition and elliptical style of this chapter are somewhat tantalizing. However, a great deal of the obscurity is, I take it, due to the common confusion which results from taking Aristotle to deal with different kinds of sentence predication and propositional being, instead of following him in his endeavour to tell apart the different ways in which, when bringing up the outside things for discussion, we can address them — in accordance, that is, with the specific purport of each discussion ('focalization' and 'categorization').

## 8. 22 *Some basic misunderstandings concerning Met. Δ 7*

Aristotle's intentions concerning his metaphysical investigations may be, and often actually are, misunderstood in two respects, basically. The first misunderstanding occurs when he is taken to speak of the outside things by themselves and their different domains (as if he just classifies and 'files' all things-there-are), instead of the different ways in which *we speak about* them. Another confusion results when the examples Aristotle offers to explain what he means to express by the

<sup>20</sup> *Met.* Γ 2, 1003b5-10.

different senses of 'being', are explained in terms of propositional or 'statemental' being.<sup>21</sup> In fact, the supposed obscurities and problems raised in Δ 7 are mainly due to the false impression that Aristotle is exemplifying our different uses of the term 'be' as occurring in statements.

In his discussion of the various senses of 'be' in Δ 7, Aristotle is definitely not speaking of several kinds of beings, to wit things possessing a mode of being in their own right, telling them apart from other things that only are coincidentally, and so on. What he is distinguishing is the distinct modes of being *we* may discern in the outside things, which are all, without any exception whatsoever, themselves subsistent things. This is quite understandable: for Aristotle's main thesis (against Plato's hypostatizing the properties of the outside things) is precisely that anything having real existence is a subsistent particular.<sup>22</sup> To consider modes of being as distinct, therefore, merely results from *our* setting apart the ontic features found in an outside thing, which as such cannot be regarded as several beings.<sup>23</sup>

For this reason, the expressions καθ' αὐτό, κατὰ συμβεβηκός, ὡς ἀληθές, δυνάμει καὶ ἐντελεχείᾳ should all be taken as distinctive of as many ways the outside things can *be said* (λέγονται) to be, i.e. the ways they are brought up by people for discussion, in accordance with their specific (essential or coincidental) mode of being that is at the focus of our attention, given the scope of the discussion at hand. The frequent use, not only in Δ 7,<sup>24</sup> of λέγεσθαι (λέγεται, λέγονται) and τὸ λεγόμενον must be taken pregnantly in this respect.

<sup>21</sup> Also Bäck (2000), 62-87, and *passim*.

<sup>22</sup> Cf. Aristotle's "inviolable postulate" (Guthrie VI, 103) of the primacy of individual being.

<sup>23</sup> In his study of Aristotle's theory of predication (2000), Allan Bäck unconvincingly claims that the formula 'being said in many ways' should be explained "from a modern perspective at any rate" in terms of Aristotle making "distinctions of being on many different levels", and "in some passages even *conflating* (italics mine) those levels." Bäck too seems to take (59ff.) Aristotle to be thinking of "sorts of objects that have being", "different sorts of things" (66 and *passim*). His discussion (62-74) of *Met.* Δ 7 testifies to his view that in Δ 7 "different sorts of being" ("something can *be* in many ways"; "objects in accidental categories") are under examination. As so often, however, the interpreter's confusion is not Aristotle's.

<sup>24</sup> Γ 2, 1003a33; b2,4,6,9,12,14,15,17; Δ 7, 1017a7,10,14,20 (τὰ κατὰ συμβεβηκός εἶναι λεγόμενα), 22,25 (τῶν κατηγορουμένων = 'the things indicated by the different categorial appellations'); b3 (φαμέν). Cf. the way in which at *Top.* I 9, 103b27 the list of categories, which are to implement τὸ ὄν τὸ καθ' αὐτὸ λεγόμενον, is introduced: "*He who indicates* a thing's quiddity" (ὁ τὸ τί ἐστὶ σημαίνων). Also *EN* I 6, 1096a23 and *EE* I 8, 1217b25-26.

A kindred misunderstanding, which may be viewed as a sequel to the previous one, and which many interpreters are liable to, consists in mistaking Aristotle's examples for instantiating statemental being. Instead, Aristotle is continuously dealing with several modes of being which are discernible in things and may therefore be assigned to the things-that-are (τὰ ὄντα) qua apprehended by themselves, irrespective of the subject or predicate position of the terms signifying them. Matters become even worse when interpreters<sup>25</sup> proceed to ask themselves (and Aristotle — in vain, of course) what kind of propositional 'is', viz. whether 'copulative' or 'existential' or 'identative' or 'constitutive' etc., is meant. Such entirely anachronistic questions are bound to lead them into insuperable difficulties and embarrassment.<sup>26</sup>

Plainly, the obscurities these interpreters charge Aristotle with are mere products of mistaking Aristotle's real intentions. In point of fact, as I shall try to show in the next section, all problems of this kind can be precluded by taking Aristotle to be dealing with different ways of 'appellation' ('naming'), which boil down to as many ways of differentiating the outside things' simply being there into diverse modes of calling them up in discourse. These ways are easily found if we are ready to follow Aristotle's semantic procedure step by step, instead of parsing him into alien semantic construals, such as the anachronistic 'S is P' formula.<sup>27</sup>

### 8. 23 *Met. Δ 7 taken from the semantic point of view*

The chapter starts by clearly opposing (1017a7-30) two main ways in which we attribute beingness to any things whatsoever such as they present themselves to our perception. What *is* (or rather, as we have just seen, what *is said to be*) is entitled to this appellation either in its own right or coincidentally. Aristotle begins with 'that which *is* coincidentally' (τὸ ὄν κατὰ συμβεβηκός). It is of paramount importance to notice that the very idea of 'being coincidentally' implies that compound entities are under consideration here, things, that is, which consist of two or more ontic elements ('forms') from different categories, together making up a thing (putatively)<sup>28</sup> occurring in the

<sup>25</sup> Like Ross I, 306-8, and Kirwan, 140-6; cf. Bostock, 46-52.

<sup>26</sup> See my next section.

<sup>27</sup> My sections 2.14-2.16. Celluprica (1987, 175) seems to have a similar onomastic or 'non-statemental' view of Aristotle's idea of the differentiation of 'be' as intended in *Met. Δ 7* and elsewhere.

<sup>28</sup> I often add such words as 'putative' or 'supposed' to make plain that things

outside world. Aristotle instances the three kinds of combination he has in mind by referring to our assigning 'being(ness)' to one of the following particular<sup>29</sup> entities:

- (a) the compound entity 'the just man-educated';
- (b) the compound entity 'the man-educated';
- (c) the compound entity 'the educated-man'.

As we have already remarked, these examples are commonly taken<sup>30</sup> to contain (disguised) sentence predications ('that the just man *is* educated' etc.), but, quite apart from the puzzles one gets oneself into on this interpretation,<sup>31</sup> the verbs φάμεν and λέγομεν should be taken to refer to our assigning 'being' to compound entities, by *calling* them 'so-and-so'. No doubt, generally speaking, this happens for the most part by our framing statements like 'the just man is educated', but the syntactical location of the appellation (named term) in predicate position is immaterial. This is the more cogent in light of the anatomy of Aristotle's λόγος ('apophantic expression'), which for his own doctrinal purposes he intentionally frames thus:

'Is: [(simple or compound) assertible]',  
quite differently from our 'S is P' construal.<sup>32</sup>

In view of this mistaking the nature of Aristotle's statement-making, it is not at all surprising, as Ross (*ad loc.*) suggests it is, that Aristotle, while dwelling on, as Ross puts it, "the two main senses of the copulative 'is' — those in which it indicates respectively accidental and essential being — should say nothing of the existential 'is', which nevertheless is presupposed in his account of accidental being". Ross tries to explain Aristotle's 'omission' by assuming that logically the existential 'is' may be distinguishable from the copulative, and metaphysically it is not, "for nothing can be without being of some kind". This is true enough, but not at all to the point, for we should be well aware that all such distinctions as 'copulative' from 'existential' (and the like) are of our making, and do not find any substantial support in Ancient authors, in particular Plato and Aristotle.<sup>33</sup>

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*conceived of as* existing in the outside world are also included.

<sup>29</sup> Aristotle's constant use of definite articles (1017a7-16) should be noted, as should the use of τὸδε and τῷδε at a12-13.

<sup>30</sup> E.g. Ross, Tricot, Kirwan, Reale *ad loc.*

<sup>31</sup> See my previous section.

<sup>32</sup> See my section 1.22, where Aristotle's deep structure analysis of the statement-making utterance is discussed.

<sup>33</sup> See my sections 1.51; 2.12-2.17 (for Aristotle); De Rijk (1986), 65-7; 72-6; 166, n. 4; 288, n. 36; 315, n. 96; 316-22; 328-30; 347-50 (for Plato). The notion of

Anyway, to see the apophantic structure as essential for Aristotle's examples can obscure, as it more than once actually does,<sup>34</sup> the main purpose of this chapter, namely to discuss the distinct ways in which we assign distinct modes of being to things.

The significance of Aristotle's semantic views can be properly assessed by comparing his ontological view to Plato's. Plato takes particular entities to be determinate bundles of embodied forms, which are as many 'rendez-vous' of the dynamic participata (δυνάμεις) issuing from the corresponding Transcendent Forms.<sup>35</sup> This view, which, of course, bears no resemblance whatsoever to an Aristotelian 'substance-accident' structure, let alone anything like a substratum-attribute analysis, implies that to Plato, the compound entity, such as the just man, who is in fact a combination of en-mattered manhood and justness, can equally well be designated by an expression like 'an instance of human justness' as by 'an instance of just manhood'. To Aristotle on the other hand, the particular is a compound whose elements are not on equal footing, because he postulates the existence of some substratum (ὑποκείμενον), which possesses a degree of being-ness of its own,<sup>36</sup> unlike 'its properties', which owe their being to their inhering in the substratum. Evidently, the view of subsistent being outside the domain of the Transcendent Forms is entirely alien to Platonic thought. It is, therefore, Platonic ontology that Aristotle has to face. Now that he can no longer as a Platonist take refuge in a Transcendent Realm of Being shared in by particular instantiations, Aristotle has to make clear what in his view the ontic structure of the entities occurring in the sublunar world should be. This is precisely, I think, what Aristotle is trying to do in the present texts.<sup>37</sup>

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'copula' and 'copulative being' does not emerge until 500 A.D. (Ammonius); my sections 1.51; 3.35.

<sup>34</sup> So Ross I, 306-8; Kirwan (1971), 140-6. Although Bäck too (2000, 62ff.) explains Δ 7 in terms of copulative 'is', he has rightly observed (*ibid.*) that "in the 'being accidentally' paragraphs of Δ 7, Aristotle is not distinguishing accidental from essential predication"; but he failed to see that there is no talk of 'predication' at all.

<sup>35</sup> De Rijk (1986) 327-30; 350-4.

<sup>36</sup> Cf. the (however insufficient, though) credentials of 'matter-hypokeimenon' discussed in *Met. Z.*

<sup>37</sup> We should continually be aware that the notion of 'substance' is of Aristotle's invention. He uses it to indicate that which possesses 'being-ness' (οὐσία) *par excellence*. The word 'substance', accordingly, only applies to cases in which the generic sense of οὐσία is upgraded to mean 'subsistent beingness'.

Returning now to the opening lines of  $\Delta$  7, we should take them to represent Aristotle's view of the ontic structure of things which are (seen by us as) made up of coincidental forms, alongside their substantial form. Such particular forms owe their being to some particular substratum. To emphasize the semantic approach coming to the fore in Aristotle's exposition the relevant words will be put in boldface:

*Met.*  $\Delta$  7, 1017a7-19: That which *is* may **be** so **named** either coincidentally or in its own right. Coincidentally, as for instance we **say** the just<sup>38</sup> to *be* the educated and the man to *be* the educated, and the educated to *be* the man.<sup>39</sup> <In these cases coincidental combinations are involved> in much the same way as we **say** the educated to *be* the housebuilder, because being educated has coincidentally fallen to the housebuilder, or the other way round; for <in our example> 'this *is* this' means that this has coincidentally fallen to this. And so it is in the cases mentioned above; for when we **say** the man to *be* \*the educated' and \*the educated to *be* the man, or \*the pale to *be* \*the educated or \*the educated to *be* \*the pale, in the one case it is because both <forms> have coincidentally fallen to the same thing, and in the other because <the form> has coincidentally fallen to a thing-that-is; while <when **saying**> the educated to *be* the man, it is because the educated has coincidentally fallen to the man. It is in this way that the not-pale **is said** to *be*, because that which it has coincidentally fallen to *is*.

What all these examples are meant to make clear is that a particular entity (a 'what-is') when it is qualified according to a coincidental mode of being, presents an instance of a coincidental compound, which is always made up of a substratum which *is*, and so grants being to its inherent property or properties, regardless of whether or not the substratum is explicitly expressed. Thus Aristotle's summary of this part of the chapter focusses not on this sense of 'be', taken by itself, as though it were a separate ontic domain, but the *things* said to *be* coincidentally ( $\tau\acute{\alpha}$  κατὰ συμβεβηκὸς εἶναι λεγόμενα), where the adverb (adverbial expression in the Greek) should be taken to

<sup>38</sup> One should render the substantivated masculine form τὸν δίκαιον 'the just', not 'the just *man*' (however offending it may be against English idiom), because the fact that the substratum is not expressed is essential for this example. The same holds good for the substantivated nouns of the other examples.

<sup>39</sup> I think we have to render the (grammatically) predicative noun with the definite article ('the educated etc.), because what Aristotle has in mind is to designate precisely *this* particular entity, say, Socrates, by the name '\*this educated'. Notice that Greek grammar does not allow the definite article to be used before a noun in predicate position (except in cases such as ὁ αὐτός and the like); see Kühner-Gerth I, 591f.

indiscriminately determine the verb ‘be’ (εἶναι) and the participle ‘being said’ (λεγόμενα)<sup>40</sup>:

*Ibid.* 7, 1017a19-22: The things **said** to *be* coincidentally, then, are **so said** either (a) because both <forms involved in this designation> belong to the same thing-that-*is*, or (b) because the form under consideration<sup>41</sup> belongs to a thing-that-*is*, or (c) because the thing (substratum) itself, which that of which it is itself **said** belongs to, *is*.

The following cases are meant: (a) the compound consists of two coincidental forms (e.g. the-pale-being-the-educated) referring to their common (unnamed) substratum; (b) the compound consists of the substratum explicitly named and one (or more) of its coincidental forms (‘the-man-being-the-educated’); (c) the compound consists of a coincidental form of the substratum and the substratum itself (‘the-educated-being-the-man’).<sup>42</sup> So in Δ 30, 1025a21-24, the notion ‘what-is-coincidentally’ is defined in terms of the relationship coincidental states have to the substratum they happen to inhere in. It is this contingent relationship, i.e. a relationship not based on the fact that the substratum is precisely of this particular nature, that makes the compound incidental:

*Met.* Δ 30, 1025a21-24: Therefore since there are attributes and substrates they attach to, and some of these apply to them only at a certain place and time, any attribute that attaches to a substratum, but not because it is *this* substratum, or *now* or *here*, will be a coincidental one.

Therefore any causal (or inferential) relationship between the things signified by the respective designations is out of the question. The mere fact that they have come together (συμβεβηκέναι) and extensionally coincide here and now does not ensure that they are interchangeable or causally related. In matters of fact, what comes together is ‘things’ from different categories, to wit properties from one or more of the non-substantial categories, which coincide with a substratum named after the category of substance. Elsewhere they are characterized as ‘non-quidditative units’. And as for the incidental properties themselves, they only possess an improper mode of being, which in a way comes close to non-being (1026b12ff.).

<sup>40</sup> De Rijk (1980), 30f., and Kirwan, 200 (re *Met.* E 4, 1028a2).

<sup>41</sup> Reading at a21 ἐκεῖνο, with the codex Laurentianus and the exemplar of the *translatio Moerbekiana*; the other MSS reading the dative ἐκεῖν.

<sup>42</sup> The present discussion about ‘coincidental being’ should be juxtaposed to that concerning ‘coincidental one’ found in *Met.* Δ 6.

Matters are, however, quite different as far as ‘what is said to *be* καθ’αυτό’ or ‘in its own right’ is concerned.<sup>43</sup> In this case ‘be’ is claimed by Aristotle to be modified along the lines of its division into the ten categories. As opposed to the previous mode of being (‘coincidental being’), the essential mode of being must bear on compounds whose components are all found within one and the same category, e.g. states of affairs such as ‘man’s-being-an-animal’ or ‘white(ness)’s-being-a-colour’, or such disjunctive states (modes of being) as ‘being-a-man or being-an-animal’, or ‘being-a colour or being-a-magnitude’ etc.:

*Met.* Δ 7, 1017a22-27: All things signified by the figures of appellation (σχήματα τῆς κατηγορίας) **are said** to *be* in their own right; for these diversify ‘be’ in the same number of ways as there **is talk** of ‘*be* in its own right’.<sup>44</sup> Since, then, some appellations signify what-it<sup>45</sup>-is; some, its how being qualified; some, its magnitude; some, its how being related; some, its acting or undergoing; some, its being where or when; ‘be’ has a meaning matching each of these appellations.

Thus it is unequivocally stated by Aristotle that each categorial mode of being is to implement the empty notion of εἶναι.<sup>46</sup> The same idea is found in chapter 3 of *Int.*, where the verb ‘be’, including the articular participle τὸ ὄν (‘that which is’), is claimed to have no meaning of its own, but only to constitute (‘co-signify’) a meaningful expression together with the other main parts of speech (onoma or rhema), so that the ‘things composed’ (συγκείμενα) of this connotative ‘be’ and the nominal or verbal semantic value are significative of a state of affairs (πράγμα).<sup>47</sup> This co-significative function of ‘be’ is explained in the present context with respect to the rhema part of the state of affairs, by remarking that each rhema stands for a mode of being, as appears from the way it is analysed into ‘be’ and the adjectival verb’s participle indicating a special modification of ‘be’:

*Ibid.* 7, 1017a27-30: For there is no difference between ‘a man *is* thriving’ and ‘a man thrives’, or between ‘a man *is* walking (or cutting)’ and ‘a man walks (or cuts)’, and likewise in the other cases.<sup>48</sup>

<sup>43</sup> Once again the phrase ‘in its own right’ (καθ’αυτό) equally determines the participle ‘being said’ and the infinitive ‘be’. What is at stake is naming on the basis of the ontic conditions we are focussing on.

<sup>44</sup> This sentence merely seems to express a rule of thumb for identifying cases of a thing being in its own right.

<sup>45</sup> I.e. the thing designated by the appellation.

<sup>46</sup> In a similar way, the notion of one-ness is implemented; my section 9.35.

<sup>47</sup> *Int.* 3, 16b22-25; also *SE* 22, 178b36-179a10; Frede & Patzig II, 47.

<sup>48</sup> Owing to his mistaking this chapter as discussing propositions (sentences)



Like Plato, Aristotle regards all particular being as a modified form of 'be', i.e. being-so-and-so. In Aristotle's view, however, the unqualified 'be' is devoid of any meaning and by itself merely an empty container, quite contrary to Plato, for whom unqualified 'Be' is the unlimited plenitude of transcendent Being (*plenitudo Formarum*), which is partaken of by Its particular instantiations. Unlike Plato, to Aristotle it is the different particular immanent forms themselves that bestow being-ness upon the inhabitants of the outside world,<sup>49</sup> not 'transcendent Perfect Being' which gives sublunar objects a share of Itself transmitted through imperfect instantiations of the all-inclusive Form, Being-ness.

Aristotle's resolution of 'walks' into 'is-walking' is much more than just a matter of grammar. It should be seen as truly representative of his metaphysics of the immanent forms, which he was constantly setting against Plato's metaphysics of Being. From the linguistic point of view, the Aristotelian doctrine of being is clearly reflected in the (grammatically) periphrastic and (semantically) connotative use of the participle 'be-ing' (ὄν), which is included in any noun, and the present participles of adjectival verbs which their finite forms are reduced to.<sup>50</sup>

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instead of appellations, irrespective of their being used in predicate position when occurring in propositional contexts, Ross (I, 307) is of the opinion that Aristotle "makes his meaning unnecessarily obscure by citing (1017a27-30) propositions which do not assert essential being at all. 'The man is healthy', 'the man is walking', 'the man is cutting' are purely accidental propositions just like 'the man is musical'." However, in fact, these sentences as a whole are not under consideration, but rather their attributive 'appellations' (i.e. the categories involved in the predicate terms of these sentences). In addition, we have to realize that, for his own philosophical purposes, Aristotle reduces (rather artificially, it should be conceded) the colloquial dyadic 'S is P' formula, ἄνθρωπος ὑγιαίνει to the monadic assertorial expression ἔστιν ἄνθρωπος ὑγιαίνων, meaning 'Is <the case>: [(man & healthy) be-ing]'. The very artificial character of this reduction, which must have sounded harsh to Greek ears too, shows the pertinence of Aristotle's intentions. Aristotle's deep structure analysis is discussed in my section 2.1.

<sup>49</sup> At *An.* II 4, 415b8-28, Aristotle develops the idea of the soul-form as yielding, in its capacity of substantial form, beingness to an animal. This passage has led to the well-known adage 'forma dat esse' featuring in later philosophic thought. For this adage as fundamental to the thirteenth century 'metaphysics of forms' see Fabro (1961) 344-62. In light of the Aristotelian 'forma dat esse' idea, the dative in phrases like τὸ ἀνθρώπῳ εἶναι is also likely to have the connotation of a *dativus causae*.

<sup>50</sup> For this important feature of Aristotelian semantics see my section 1.64.

## 8. 3 'What is coincidentally' should be ruled out

Before going into Aristotle's reasons for disqualifying coincidental being a preliminary remark should be made. When told that 'coincidental being' is the subject of no science, and cannot, accordingly, be studied by metaphysics either, it would be foolish to think that entities such as 'pale-man' or 'Socrates'-being-seated' should not be of the metaphysician's concern at all. They most certainly are genuine inhabitants of the outside world, and thus seem to be entitled to belong to the subject matter of metaphysics. Given the fact that the different senses of 'be' are all under investigation in the introductory part of the *Metaphysics*, what Aristotle intends to discuss in Book E is the different ways in which things of the outside world may be brought up for discussion, and to explain that the only access to a thing's 'what-it-is' is accomplished by indicating it in the proper way (καθ'αυτό or 'per se'). In chapters E 2 and 3, then, the most treacherous approach to true being, so much in favour among the Sophists, will be cast aside, viz. starting by examining things (substances, to be sure), when designated by means of a term or phrase signifying them in one of their coincidental states. Whoever is unable to unmask their semantic disguise will only be baffled and led astray by sophistic trickeries.

8. 31 Συμβεβηκός as defined in *Met.* Δ 30

Let us start with Aristotle's expositions of the term συμβεβηκός occurring in the *Lexicon*, *Met.* Δ 30. Two meanings are distinguished. To begin with the second — which is of no concern in the present investigation — the word is used to designate that which falls to something in virtue of itself, though without being included in its essence, as, for instance, the triangle's property of possessing interior angles equal to two right angles (1025a30-34).<sup>51</sup> These καθ'αυτὰ συμβεβηκότεα ('things that fall to something in virtue of itself') are such as to be submitted to epistemonik proof and are dealt with in *Posterior Analytics*<sup>52</sup>

<sup>51</sup> Also at *PA* I 3, 643a27-28.

<sup>52</sup> *APo.* I 7 and 10, as opposed to the coincidental indemonstrable properties (*ibid.* I 7, 75a18 and in *Met.* E 2-3). Cf. *An.* I 1, 402a9; a 15-16 (τὰ κατὰ συμβεβηκός ἴδια); 402b18-403a2 (τὰ συμβεβηκότεα ταῖς οὐσίαις).

The first use of ‘coincidental being’, which is precisely the counterpart of the previous one, is of our concern now, since it is the one meant in E 2-3, to wit the term ‘what-is’ as used to stand for a coincidental state of affairs:

*Met.* Δ 30, 1025a14-21: We call coincidental that which holds good of something and is true to say, but neither of necessity nor for the most part; as for instance when digging a trench for a plant, somebody found treasure. This — to find treasure — is coincidental to somebody’s digging a trench; for neither does the one come of necessity out of or after the other, nor does one for the most part find treasure when planting. And true, someone, being educated, *might* be pale, but since this comes to be neither of necessity nor for the most part, we call it coincidental.

Kirwan’s (180f.) remark that the expression ‘is coincidentally ...’ works like ‘is in most cases ...’ or ‘is on average ...’ may easily put the reader on the wrong track (as it actually did himself). What Aristotle has in mind is not to inform us about the more or less frequent occurrences of certain events, but to call to our attention how some states of affairs (in the present case, some events or doings) can be brought up by a coincidental designation. Thus, speaking of some man’s actually planting, this action *can* be brought up by using, apart from the proper designation ‘to-be-putting-a-plant-in-the-ground’, that of ‘finding-treasure’, which, although it is truly applied to this particular action, none the less designates it according to one of its coincidental states.<sup>53</sup> Therefore, the common rendering of τῷ ὀρπύρτοντι βόθρον (‘the man who is digging a trench’, and the like; Ross, Tredennick, Kirwan, Warrington, Tricot, Reale) is less fortunate, because treasure-finding is coincidental, not to the man who is planting, but to the activity of planting.<sup>54</sup> Similarly, an educated man who is actually looking pale can truly be called ‘a pale entity’, but if so, this happens because of some coincidental state of his. This being the case, when asked for an essential description (‘definiens’) of the state of ‘putting-a-plant-in-the-ground’ or ‘being-educated’, one

<sup>53</sup> Likewise, to be a reckless driver can be designated as ‘having a suicidal inclination’ — coincidentally though, since ‘being a reckless driver’ only incidentally may coincide with ‘eventually causing one’s own death’. To argue from coincidental appellations was Peter Abelard’s (1079-1142) favourite line of argument in his *Ethica*, in order to endorse his intentionalistic ethical tenets. The scheme he used is ‘vult facere hoc crimen; ergo vult puniri’. See De Rijk, “Abelard and Moral Philosophy” in *Medioevo* XII (1986).

<sup>54</sup> By the way, Greek idiom too favours the rendering ‘somebody’s digging’ to ‘the man who is digging’.

should refrain from advancing phrases like ‘treasure-finding’ or ‘being-affected-by-paleness’ as their respective definientia.

Next the notion ‘what-is-coincidentally’ is defined in terms of the relationship the coincidental state has to the substrate it happens to inhere in:

*Ibid.* 30, 1025a21-24: Therefore since there are attributes and substrates they attach to, and some of these apply to them only at a certain place and time, any attribute that attaches to a substrate, but not because it is this substrate, or now or here, will be a coincidental one.

It will not come as a surprise that there is no definite cause of coincidental states of affairs, and that its cause is something that may happen to be (or not to be) the case, both equally well: so that it is rightly called ‘something indefinite’, as it may happen by chance, either so or otherwise; and that, accordingly, such states of affairs are beyond the scope of genuine research. This is instanced by the man sailing to the island Aegina:

*Ibid.*, 30, 1025a25-30: To visit Aegina is<sup>55</sup> a coincidental event for somebody if he arrived there not in order to visit it, but having been forced off course by a storm or being captured by pirates. The coincidental state of affairs has come to be and is really the case, but not in virtue of itself [i.e. as an intended event], but of something else: for the storm is the cause of his getting to a place he was not sailing for, viz. Aegina.<sup>56</sup>

What Aristotle intends to make clear is that (a) the state of affairs ‘the-sailor’s-visiting-Aegina’ is a coincidental one if you are to describe the state ‘the-sailor’s-sailing-for-X’; and (b) the causal chain of events aiming to explain the man’s actually arriving at Aegina is not something that reasonably ensues from his purpose and planning, but something else, which cannot be gathered from the definition of ‘being intentionally sailing for a certain place’ in virtue of itself (καθ’ αὐτό), but can only be regarded as a coincidental event because of its containing one or more unforeseeable disturbing components, such as adverse winds, pirates, or whatever.

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<sup>55</sup> As at 1027a2 and 4, the aorist συνέβη should be taken as a gnomic aorist, which is frequently used in maxims and examples. See Kühner-Gerth I, 158-61.

<sup>56</sup> Kirwan (“his not getting to the place he was sailing for”) wrongly takes the negation μή with the verb ἐλθεῖν instead of the phrase ὅπου ἔπλει, and leaves τοῦτο δ’ ἦν Αἴγινα (“and that is, as we said, Aegina”) untranslated. For that matter, his comments (181f.) on the whole passage are astonishing.

*De anima* II 6 also presents a nice example of this use of κατὰ συμβεβηκός. In his account of the object of senses, in particular their proper or special object, the latter is contrasted among others with what is labelled the ‘coincidental object’:

*An.* II 6, 418a20-23: There is talk about ‘sensible object’ in a coincidental way when, for instance, the pale entity we perceive is the son of Diares; this [i.e. the son of Diares] is perceived coincidentally, because it is coincidental to the pale entity being the thing perceived.

Of course, the son of Diares’s colour (paleness) surely is the proper, not the incidental object of sight. However, it is really coincidental to this particular colour perceived as belonging to Diares’s son, so that the entity perceived, viz. the son of Diares, can rightly be said to be the coincidental object of this act of perceiving. That his paleness is merely an incidental property to the entity perceived, Diares’s son, is no matter of importance, because it is the act of perceiving and its actual object themselves that are at the focus of interest now.

In *An.* III 1, 425a14-b3 the role of common sense (‘sensus communis’) is marked off from that of the special senses. Aristotle claims that in fact the ‘common sensibles’ (τὰ κοινά) are perceived by the special senses coincidentally (κατὰ συμβεβηκός), that is to say, as a by-product of their proper activity, viz. the perception of their appropriate object, colour, sound etc. Thus the special senses, although they do not focus on change (κίνησις), coincidentally perceive e.g. magnitude, shape, and number: all these things are perceived owing to the fact that the objects are (or are not) changing (πάντα κινήσει αἰσθανόμεθα; 425a16-17, where Ross needlessly cancels κινήσει). Because of the coincidental character of all these observations it is impossible that there should be a *special* sense organ, Aristotle argues (i.e. a sixth organ akin to the five special ones) to perceive the common sensibles. Next Aristotle goes on to characterize the proper function of the special senses as focussing each on a distinct quality of the object, which activity is indispensable for recognizing this quality out of the collection of different qualities belonging to the object under examination. If it were not like this we would be thrown back on coincidental perception of the proper qualities, as is found in the perception of, say, sweetness by sight, or the perception of A’s being Cleon’s son. This passage aptly clarifies the κατὰ συμβεβηκός device:

*An.* III 1, 425a21-27: For otherwise our perception will happen in the same <coincidental> way as in the these qualities, owing to which we

recognize <each of> them when they occur together. If it were not like this we could in no way perceive them except coincidentally (κατὰ συμβεβηκός), just as we perceive of Cleon's son not that he is Cleon's son, but that he is something pale,<sup>57</sup> the pale object being coincidentally Cleon's son (τούτῳ δὲ συμβέβηκεν υἱὶ Κλέωνος εἶναι).<sup>58</sup>

Both chapters show many parallels to what we will find in E 2-3.

### 8. 32 Συμβεβηκός as defined in *Met. E*, chs. 2-3

In the opening lines of E, 2-3 there is a significant use of the verb λέγεσθαι ('to be said' or 'designated'). This use once again is evidence of Aristotle's predominantly semantic approach to the problem of which of the four senses of 'be' — which, admittedly, are all registered as 'be' in the unqualified sense — represents the proper object of metaphysics, as was already unmistakably stated in Δ 30:

*Met. E* 2, 1026a33-b4: But since that which *is*, when designated as an unqualified 'what *is*', is designated in various ways — one of them is, as we have seen,<sup>59</sup> that of 'what *is* coincidentally', another of 'what *is* as true' (and of 'what *is* not as falsehood'); apart from these there are the figures of appellation (τὰ σχήματα τῆς κατηγορίας), as for instance the 'what the thing *is*' <designation>, the 'how qualified', 'of what quantity', 'where', 'when' <designations> and anything else signifying <it> in this [i.e. unqualified] way <of 'being'>; again apart from all these, as that which *is* potentially and actually — well, since that which *is* is designated in so many ways, it has first to be stated that on account of 'what *is* coincidentally' there is no study dealing with it.

A first explanation is given by pointing (1026b4ff.) to the similar attitudes of other disciplines as far as coincidental being is concerned; it is simply not something any of the disciplines are focussed on. Therefore regardless of whether a house is "pleasing to some,

<sup>57</sup> Reading (and following Ross's suggestion in his critical apparatus) with the Laurentianus 81 and the Vaticanus 260 λευκόν instead of λευκός.

<sup>58</sup> Cf. *An.* II 6, 418a20-23. Another nice example of the phrase is found at *Sens.* 1, 437a4-18, where hearing (ἀκοή) is said to be more important than sight (ὄψις), because hearing coincidentally (κατὰ συμβεβηκός) makes the largest contribution to intellectual activity (a5: πρὸς δὲ νοῦν; a11: πρὸς φρόνησιν); for speech, which is the cause of learning, is so because it is audible; but it is audible not in itself but coincidentally, in so far as speech (λόγος) is composed of words (ὀνομάτων), and each of them is representative of something (σύμβολόν ἐστιν). The phrase κατὰ συμβεβηκός indicates that here is talk of a concomitant property (something συμβεβηκός) of what is audible, which is itself the proper object of hearing. It is pertinent to realize, however, that when it comes to teaching and learning, the concomitant property is at the focus of interest.

<sup>59</sup> The reference is to *Met.* Δ 7, 1017a7ff.

harmful to others”, and so on, “the discipline of housebuilding is not productive of any such things” (b7-10). Of course, the only thing Aristotle means to say is that the art of housebuilding is focussed on the mere ‘what-it-is’ (‘quiddity’) of ‘house’, not the properties (however important they may be) of the actual house.<sup>60</sup>

What follows (1026b10-24) elucidates Aristotle’s semantic approach even more. The geometer is said not to study what is coincidental to his figures, in the sense meant here,<sup>61</sup> nor whether ‘triangle’ and ‘triangle having two right angles’<sup>62</sup> are different. Kirwan ignores the semantic purport of the sentence by rendering twice “*a triangle*”, as if Aristotle contends that anybody (including the geometer) could possibly think that there is really such a difference *in re*. Again, it is all about naming and designation (‘appellation’). The geometer is not interested in semantic questions such as whether there is a pertinent (formal, not referential, of course) difference between the name ‘triangle’ and the phrase ‘triangle’s having two right angles’ — questions that are vital to the metaphysician in his search for the true nature of things. The geometer’s attitude is understandable enough, for a thing’s being designated according to its ‘what-to-be-coincidentally’ is, so to speak, only a matter of naming it, in order to bring it up under one of its coincidental ontic aspects. As soon as you take such designations *qua* indicating a thing’s quiddity (‘what-it-is-by-itself’) you will end up with sophistic arguments:

*Ibid.*, 2, 1026b12-21: And this happens reasonably enough; for what is coincidentally is like a mere name. Hence Plato was in a way not

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<sup>60</sup> Kirwan, who criticizes Aristotle’s example by remarking (190) that the production of positive properties *is* a part, although not a necessary part, of the housebuilder’s skill, fails to see Aristotle’s point: the housebuilder is really a housebuilder if the product is to be called ‘house’, period. His objection that Aristotle fails to show that *no* study deals with coincidental properties of houses, such as their location, being the concern of the landscape artist and the zoning officer, is entirely off the mark, as long as the housebuilder as such is concerned. The point — for Aristotle — is that the location of the house is a coincidental being for the housebuilder, though no doubt essential for the landscape artist, whose study precisely is about location. It cannot sufficiently be emphasized that focalization and categorization are the crucial devices of Aristotle’s semantics and ontology.

<sup>61</sup> I.e. properties such as their being pleasant to see (when occurring in e.g. a tympanon), or useful for the art of housebuilding. The necessary attributes of geometrical figures are clearly excluded by the restrictive use of the adverb οὕτω (‘in this sense’). For the term συμβεβηκός used for attributes that, while not strictly belonging to a thing’s essence, do fall to them ‘in virtue of themselves’, see Δ 30, 1025a30-33.

<sup>62</sup> Shorthand for ‘having the sum of its interior angles equal to two right angles’; see e.g. *APo.* I 1, 71a19-20.

wrong in ranking sophistic as dealing with what is not. For the arguments of the sophists deal, so to speak, above all with what is coincidentally: whether educated-thing and literate-thing, or educated-Coriscus and Coriscus are different things or the same; and whether everything that is, but not always, has come to be, so that if someone, being literate, has come to be educated, he has also, being educated, come to be literate<sup>63</sup> — and all the other arguments of this kind. For what is coincidentally is obviously close to what is not, as is clear also from arguments such as this<sup>64</sup>: with things-that-*are* in another sense there is a process of coming to be and passing away, but with things that *are* coincidentally there is not.

Kirwan (190-2) is wrong in thinking that in this passage Aristotle is excluding the above semantic questions from both geometry and metaphysics and any other discipline as well, while at 1004b2-3 they were included within the sphere of metaphysics. This misapprehension goes with a kindred one on his part, to the effect that, with respect to the relationship between sophistic and metaphysics, there is an inconsistency between the view developed by Aristotle at *Γ* 2, 1004b22-23 (that sophistic and dialectic range over the same domain as philosophy, viz. that-which-is) and his remark (at *E* 2, 1026b14-15) that in a way, sophistic deals with what-is-not. Kirwan is of the opinion that the thought which finds no connection between sophistic and metaphysics seems, like much of *E*, more primitive and muddled than that of *Γ* 2. He thinks that the contrast is even heightened by the fact that the sophistical questions listed at 1026b16-21 are really close to those included (at 1004b2-4) within the domain of metaphysics.

There is, however, no inconsistency at all on Aristotle's part. Kirwan fails to see that the close relationship between sophistic, dialectic and metaphysics pointed out in *Met.* *Γ* 2 is not denied or ignored in *E* 2. What Aristotle is claiming in *E* 2 is that by wrongly interpreting the differences and similarities of semantic devices, sophistic is going in

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<sup>63</sup> I think we have to interchange (at b19-20) the words *μουσικός* and *γραμματικός* to arrive at a sophistical conclusion. This interference in the text is supported by *Top.* I 11, 104b25-27, where it also appears that the sophists did not advocate the paradoxical conclusion, but instead abused its commonly being recognized as false in order to reinforce their own odd claim about being: "[...] for example, the view that not in every case that which is either has come into being, or is eternal, as the sophists contend; for, they say, he who, being educated, is literate, is so neither after he [sc. being educated] came to be literate, nor since he has been so from eternity". For Plato dealing with the odd metaphysical conclusions drawn by the Sophists from such sophisms see *Sophist*, 253Eff., and De Rijk (1986), 134ff.

<sup>64</sup> I.e. arguments in which the semantic difference is recognized but wrongly interpreted.



quite a different direction from metaphysics, notwithstanding the fact that they both deal with what-is-not: sophistic, because what is not is its proper and favourite subject matter; metaphysics, because it cannot allow itself to be silent about 'what-is-not' *qua* counterpart of its own proper object, 'what-is'.<sup>65</sup>

None the less, we have to state what the precise nature of coincidental being is. Such an investigation is properly a search for its causes, and Aristotle now sets out to show (1026b24ff.) — still in response, it seems, to the odd view of the sophists on being and becoming (the process, that is, from a thing's 'what-it-is-not' to its 'what-it-is') — what the causes are of coincidental being. At the same time it will become clear that no discipline deals with coincidental being, because, *qua* coincidental, it is beyond serious epistemonical examination. The cause, then, of the coincidental is the fact that among the things-that-are some are in the same state always and of necessity, while others are only so for the most part. This is the origin and cause of coincidental ontic states. Several states (of affairs) are adduced by the author to exemplify this: 'there-being-cold-stormy-weather-in-the-dog-days', 'a-man's-being-pale' (for that is neither always the case nor for the most part),<sup>66</sup> as opposed to 'a-man's-being-an-animal'; furthermore 'a-housebuilder's-healing-somebody'. The last example is obviously Aristotle's favourite one to explain coincidental states which should be revealed as such in order to arrive at the proper way of taking things into consideration:

*Ibid.* 2, 1026b37-1027a5: And the-housebuilder's-healing-somebody is a coincidental state of affairs, because it is the nature not of the housebuilder but of the doctor to do this, but it is merely a coincidence that the builder is a doctor; and a cook of dainty entremets, who properly aims at giving pleasure, might produce something healthy, but not by virtue of his culinary art; and therefore it is a coincidence, we say, and in a sense it is the cook who produces it, but not in an unqualified sense.<sup>67</sup>

In the next few lines (a5-15), Aristotle points out that since the majority of things are not of necessity but are involved in a continuous process of change ('coming-to-be'), it is necessary that there

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<sup>65</sup> One may compare Plato's extensive discussion about the Sophists' views on 'what-is' in the *Sophist*; De Rijk (1986), 110ff.; 164ff.

<sup>66</sup> This example shows that by λευκός Aristotle understands the property of 'being-pale' (as a result of an incidental cause, such as fear or some physical indisposition), not 'white'.

<sup>67</sup> Compare what I have said about 'stratificational semantics'; see my *Index s.v.*

should be coincidental states, as e.g. the pale man is neither always nor for the most part educated; and that when this sometimes occurs, this must be a coincidental state of affairs. That is why matter, which is capable of being involved in a process of change,<sup>68</sup> is the cause of there being coincidental states.

The concluding part of the chapter aims at explaining that no discipline can possibly deal with coincidental states, because genuine investigation is concerned with what-things-*are*-by-themselves,<sup>69</sup> which is precisely what in the verbalized coincidental states is only expressed in (coincidental) disguise. So the 'what-is-it' of, say, the housebuilder cannot be properly discovered until you dispose of his coincidental doings, such as healing people, which is accomplished by him in another, coincidental capacity. This requirement of correct focalization and categorization will turn out to be an indispensable one when, in the central part of the *Metaphysics*, the aim is to focus on the genuine 'what-is' qua being the proper object of metaphysics, and, more importantly, qua true being itself, as it is in the *Physics*, for discovering what the precise nature is of change, time, and prime matter.

Finally, the third chapter (E 3, 1027a29-b16) aims to elaborate the author's view of the nature and origin of coincidental states of affairs and their occurrences.<sup>70</sup> Although the process of any coincidental state of affairs must contain some non-coincidental causes, there are always alternative preconditions (e.g. the state 'a-man's-dying' could involve either violence or a natural cause) that are unforeseeable, and, in retrospect, not deductively subsequent to the previous state of affairs:

*Ibid.* 3, 1027b8-14: Everything that will be will be of necessity, e.g. that he who lives shall one day die; for something has already come to be, as the presence of contrary states in the same body. But whether he is

<sup>68</sup> Thus 'intelligible matter' — i.e. "that which is present in perceptible things not qua perceptible, as for instance mathematical things" mentioned at *Met.* Z 10, 1036a11-12, and also, in logical analysis, the genus, which somehow is the matter of the species (*Met.* Δ 24, 1023b1-2; I 8, 1058a23-24) — is excepted. For 'intelligible matter' see Guthrie VI, 231f.

<sup>69</sup> It is pertinent to note that if coincidental modes of being are focussed on (e.g. Callias's relational mode of being-a-slave), they can be subject to 'scientific' examination as well. In such cases, interestingly, it is the essential nature 'manhood' which is considered by Aristotle a συμβεβηκός (*Cat.* 7, 7a31ff.; my section 2.41). Also my section 13.22.

<sup>70</sup> Here in particular, the parallels to Δ 30 are patently clear. The issue of the generability and destructibility of accidental causes is pertinently discussed in Dorothea Frede (1985), 207-25.

to die by disease or by violence is not yet determined, but depends on the happening of *this* or *that*. Plainly then the <necessary> causal link goes back to a certain *terminus a quo*, but the latter does not lead to something further. The <unavoidable> origin of the fortuitous, then, will be this, and of *its* occurring nothing else will be the cause.

It is sufficiently plain now that ‘what-is-coincidentally’ will not do as the proper object of metaphysics.

#### 8. 4 ‘What is-qua-true’ should also be discarded

After having rejected coincidental being as a candidate for the proper subject of metaphysics, in E 4 Aristotle proceeds to deal with another claimant among the four senses of ‘be’, viz. ‘being-qua-true’. This applicant is considered together with its counterpart, ‘not-being as falsehood’. It will be of great use in our discussion of this chapter, which is of utmost importance for our understanding of the author’s semantic *modus operandi*, to start with the exposition of the different uses of the term ψεῦδος found in the Lexicon, Δ 29.

##### 8. 41 Falsehood in Met. Δ 29

Kirwan (199) claims that in Δ 29 — unlike elsewhere, especially in *De Interpretatione* — “things, not thoughts” are under consideration. Consequently he regards Aristotle’s classification of the various uses of ‘falsehood’ and the cognate ‘false’ as surprising,<sup>71</sup> because “we should expect the main distinction to be between false objects or events (i.e. things that are not as they seem, like dreams, stage scenery, and false beards) and false statements and beliefs; instead, he ignores statements and beliefs in favour of states of affairs [...], which he groups, together with things that are not as they seem, as false ‘actual things’”(178). Owing, for the greater part, to his misinterpretation of the text, which culminates in mistaking πράγμα for ‘actual thing’, Kirwan arrives at his verdict that Aristotle’s treatment of false states of affairs is not adequate.

However, why should we expect Aristotle to deal with the outside ‘things’ rather than ‘thoughts’? Why should we not, instead, follow the author’s exposition step by step, without confusing ourselves by taking “our” (whose, for that matter?) expectations as a touchstone?

<sup>71</sup> Cf. Wolff (1999), who speaks (46ff.) of “les vraies surprises de Met. Δ 29”.

Aristotle distinguishes three senses of 'false': first the focal meaning expressed by the substantive noun ψεῦδος ('falsehood'); then two cognate applications of the focal meaning found in phrases containing the adjective noun ψευδής ('false account' and 'false man'). The focal meaning is indicated by the phrase 'falsehood-as-a-state' (ψεῦδος-πρᾶγμα). Two uses are distinguished (cf. *Cael.* I 12, 281b9-14):

*Met.* Δ 29, 1024b17-26: To begin with, falsehood is said (a) as 'falsehood as a state' (πρᾶγμα-ψεῦδος); and this sometimes because of a certain state <of affairs> not actually being put together, or incapable of being put together (for instance, 'the-diagonal's-being-commensurate' or 'your-being-seated'; (a<sub>1</sub>) one of these is a falsehood always, (a<sub>2</sub>) the other sometimes; it is in this way that these states are not things-that-are); and (b) <the term stands for> anything which, while being a thing-that-is, none the less, by nature, appears either not such as it is, or things-that-are-not, e.g. a chiaroscuro and dreams; for these are something, but not that of which they create the appearance. Thus there is talk of false states <of affairs> in this first sense either because they are not the case, or because the appearance resulting from these states is that of something that is not the case.

Let us take the second group (b) first. It is instanced by such things as dreams and a certain kind of sketch.<sup>72</sup> We have to recall at the outset one of the semantic Main Rules stated before (my section 1.71): that significative tools are indiscriminately used to stand for (1) what they are by themselves qua signs, and, in fact far more frequently: (2) the entities signified by them. Our passage offers a nice example: the sketch or dream is something existent, the former as a physical entity, the latter as a mental one; but their contents, i.e. that which they primarily represent, either does not represent a real state of affairs in a precise manner, or even does not obtain at all in the outside world, and to do so precisely is their natural disposition (1024b22: πέφυκε φαίνεσθαι), we are told.

It is easily seen, then, that their being a falsehood does not concern their real occurrence as a sign, but that which they are referring to (or claiming to refer to). The interpreter should avail himself of this precious hint for correctly grasping the purport of this chapter: a falsehood is a mental state of affairs that is not actually the case in the outside world.

Let us now look at the first group, (a<sub>1</sub>) and (a<sub>2</sub>) Quite in line with the items of the second group, its members are equally states of

<sup>72</sup> Greek σκίαγραφία is used for "a rough sketch in light and shade, which produces its effect best at a distance" (Ross *ad loc.*).

affairs not obtaining in the outer world, as is patently clear from the examples used: 'the-diagonal-of-a-square's-being-commensurate-with-its-side', and 'your-being-seated', one an everlasting falsehood, the other a contingent state, now false, but possibly true ('obtaining') at another time. But all the same, qua instances of false states they both refer to what is actually not the case in the outside world.

There is, however, an important difference between the two. Unlike the cases of the (a<sub>2</sub>) type, in those of the (a<sub>1</sub>) group the notion 'what-is-not' not only refers to what is actually not the case, but also implies the connotation of logical and ontological impossibility. This twofold use of the phrase τὸ μὴ ὄν parallels Plato's use of that expression in the *Sophist*, where it is found both in the sense of 'what-is-absolutely-not' (τὸ μηδαμῶς ὄν: 237B7ff.) and of 'not-being qua otherness' (οὐκ ἐναντίον τι τοῦ ὄντος ἀλλ' ἕτερον μόνον; *ibid.*, 257B3ff.).<sup>73</sup> The pregnant meaning (a<sub>1</sub>) is found in Aristotle at *APo.* I 2, 71b25, where it is claimed that for there to be an epistemonical proof of 'things' ('states of affairs'), the statements must be true in the first place, "because one cannot understand what is not, e.g. the-diagonal's-being-commensurate". Aristotle's instancing the diagonal's incommensurability instead of something that is incidentally not the case, is significant.

Some more observations can be made. Quite in line with the basic doctrine expounded in the opening lines of *De interpretatione*, what the sign-entity (in this case, the false state as phrased in a set of words) in the first place is a sign of, is "an affection of the soul" (παθήμα τῆς ψυχῆς) i.e. the mind's being actually affected by this or that complex notion. And what, in turn, this affection is a likeness of, is a state of affairs, the content of this mental entity, that is. By itself, a state of affairs, when taken as the content of some act of thinking, neither obtains nor does not obtain; in point of fact, it is not until it is applied to some state of affairs of the outside world it claims to bear upon, that it may turn out to be, or not to be, the case. However, of any *false* state of affairs it holds that its (incorrectly) being applied is entailed in its being false, no matter that some of them (viz. those of the 'diagonal's-being-commensurate' type) will never be truly applied to some entity of the outside world.<sup>74</sup>

<sup>73</sup> De Rijk (1986), 84-92; 164-73. For the association with 'false speech', *ibid.*, 206-12.

<sup>74</sup> Cf. *Phys.* IV 12, 222a2-7.

The use of  $\pi\rho\tilde{\alpha}\gamma\mu\alpha$  in this context and the like, especially in the *Categories* and *De interpretatione*, is pivotal. The rendering 'actual thing'<sup>75</sup> is confusing and in most cases even incorrect, because the phrase 'actual thing' is explicitly restricted to (possible) referents the word has in the outside world, and, what is more important, it precludes us from apprehending the specific use  $\pi\rho\tilde{\alpha}\gamma\mu\alpha$  has in the contexts which are of our concern now. In philosophical texts, the Greek  $\pi\rho\tilde{\alpha}\gamma\mu\alpha$  has the focal sense of 'thing including *how* it is, affected as it is by the actual circumstances inhering in it'; hence 'thing including its appurtenances' as cognized by sense perception.<sup>76</sup> Quite in line with the general rules of semantics, the word  $\pi\rho\tilde{\alpha}\gamma\mu\alpha$  signifies such a thing either (a) as merely conceived of, or (b) as (truly or falsely) applied to the outside world. Both (a) and (b) signify a thing as it stands or, to say it more philosophically, as its form is actualized.<sup>77</sup> There will be an opportunity to return to the precise meaning of  $\pi\rho\tilde{\alpha}\gamma\mu\alpha$  in due course (my section 8.43).

In the second and third paragraphs (1024b26-1025a1, and 1025a2-13) two entities are discussed that, each in their own way, are affected by falsehood and, accordingly, are accompanied by the adjective

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<sup>75</sup> Ackrill and Kirwan in their translations. Warrington has 'fact'; but in modern ears his rendering "that which is false as a *fact*" (Warrington's italics, p. 44) might sound a bit awkward, but when taken indiscriminately to stand for either 'something *known* to be true', or 'something *accepted* or *claimed* to be true' (as in "The facts given by the witness are highly questionable"), Warrington's rendering will surely do. For the mental status of 'fact' see De Rijk (1979), 21-8. On the other hand, the rendering 'thing' (Ross; 'chose', Tricot; 'cosa', Reale), which is ambiguous in a way similar to the Greek  $\pi\rho\tilde{\alpha}\gamma\mu\alpha$ , is attractive for the faithful translator. However, like Kirwan, Ross (I, 344f.) fell victim to a misunderstanding (which is not uncommon, for that matter) concerning the precise meaning of  $\pi\rho\tilde{\alpha}\gamma\mu\alpha$  (likewise Wolff 199, 48ff.), to the effect that they charge Aristotle with contradicting himself and being confused on this score. Ross even goes so far as to exculpate Aristotle by regarding the *Lexicon* of Book  $\Delta$  as Aristotle's attempt at merely classifying the current usages of terms "rather than at stating a thoroughgoing metaphysic", which, to Ross's mind, is somewhat in conflict with what he says in the *Lexicon* and elsewhere only to be expected (cf. Wolff, 49; 62). On this assumption, Ross comes to the entirely erroneous surmise that Aristotle should have adapted the terminology of Antisthenes, with its opposition of  $\pi\rho\tilde{\alpha}\gamma\mu\alpha$  to  $\delta\nu\omicron\mu\alpha$  and  $\lambda\acute{o}\gamma\omicron\varsigma$ . In fact both Aristotle and Plato make use of this most profitable contradistinction in their semantics. See for Plato, De Rijk (1986), 217-34. Once again, the interpreter's confusion is not Aristotle's.

<sup>76</sup> In this respect the Greek  $\pi\rho\tilde{\alpha}\gamma\mu\alpha$  may be compared to English 'affair' in the sense of "thing, matter, applied to anything made or existing, usually with a descriptive or qualifying term", *Random House Dictionary*, 24b.

<sup>77</sup> A form's 'actualization' should be well distinguished from its 'factualization' in the outside world. For the distinction between 'actual' and 'factual' see De Rijk (1981a), 38-40.

noun ψευδής ('false'), viz. false λόγος and false man. It is in the interests of our investigation to observe how these two uses of the adjective are related to the focal notion πρᾶγμα-ψεῦδος ('falsehood-as-a-state').

Roughly speaking, λόγος is the verbal counterpart of πρᾶγμα. Just as the latter is not merely 'thing', but 'thing including its appurtenances perceived by sense perception', so — unlike ὄνομα ('noun', 'name'), which is always a one-word expression used to merely bring up a thing for discussion — λόγος is always a more-than-one-word expression ('phrase', 'account'), and is used to stand for a state in which a thing is or a-thing's-being-in-a-certain-position. As for a *false* account, it is defined as 'the one that, qua false, is <significative> of things being not the case', which implies that every account is false when applied to some thing other than that of which it is true. There are two kinds of account: (1) a thing's proper account or definiens; and (2) any account assignable to a multitude of things.

The latter feature requires some explanation in so far as an expression's representative nature is concerned. For if two or more expressions are representative of one and the same thing, say, Socrates, the question may arise whether these expressions are identical, or to put it more properly, whether the alternative non-quidditative accounts are semantically the same as the proper account or definiens, seeing that Socrates-being-educated and Socrates are one and the same person:

*Met.* Δ 29, 1024b26-32: A false account is the one that, qua false, is of things that are not the case, and that is why every account is false of some thing other than that of which it is true, e.g. the account of a circle is false of a triangle. Each thing has, in a sense, only one account, viz. <the definiens indicative> of what it is for the thing to *be* [i.e. the thing's quiddity]; in another way it has many accounts [all of them representative of it], since the thing by itself (αὐτό) and the thing-somehow-affected (αὐτὸ πεπονθός), e.g. Socrates and educated-Socrates are in a way the same thing.<sup>78</sup>

#### 8. 42 *Antisthenes's erroneous semantic position countered*

Aristotle aims to attack Antisthenes's naïve view that it is impossible to assign to a thing an account other than its name or proper account

<sup>78</sup> Focalization and categorization are precisely based on the view that the-thing-by-itself and the-thing-somehow-affected (αὐτὸ πεπονθός) are referentially the same.

consisting of the names of its simple constituents.<sup>79</sup> His discussion of the Antisthenean view is introduced by the remark that each thing's proper account is, in a way, also applicable to some different thing, as we were told just now; whereas the false account, which, as such, was defined as referring to nothing being the case (1024b26-27), is, strictly speaking, the account of nothing. Now owing to his ignoring the qualifications made concerning the applicability of non-quidditative accounts, Antisthenes was led astray:

*Met.* Δ 29, 1024b32-34: That is why Antisthenes naïvely thought that nothing can legitimately be brought up for discussion except by its own proper account, one to one; from which the conclusion used to be drawn that there is no such thing as contradiction, and almost that there even could be no falsity.

Kirwan (179f.) thinks that Aristotle is wrong in seeing a logico-causal connection between the above Antisthenean view and the opinion that contradiction is entirely impossible, and falsity nearly impossible; and Ross (I, 347f.) seems to overshoot the mark by reconstructing Antisthenes's supposed argument such that falsity too turns out to be entirely impossible.<sup>80</sup> A simple explication of Aristotle's remark is that, in point of fact, to Antisthenes, contradiction is entirely out of the question, even if a proper (i.e. quidditative) account is involved: for if person B should intend to 'contradict' A, who (correctly) designates Socrates by either the name (ἄνθρωπος) 'man' or the phrase (λόγος) 'twofooted-rational-animal', by designating him by 'not-man' or 'not-twofooted etc.', they are not bringing up the same subject, so that there cannot be any contradiction at all.<sup>81</sup> And in case of non-quidditative accounts (for instance A designating Socrates as 'the thing-being-seated', when 'contradicted' by B designating him by the account 'the thing-being-walking'), both A and B fail to bring up Socrates properly, and in fact are talking about nobody, so that contradiction is completely out of the question. So much for the impossibility of contradicting somebody. As for falsehood ('speaking

<sup>79</sup> See Plato, *Sophist* 251 A, and De Rijk (1986) *ad loc.*; *Theaet.* 201Eff. (and McDowell, *ad loc.*), and the useful comments found in Ross I, 346-7, and Reale I, 483-5.

<sup>80</sup> The various observations made in Burnyeat (1989, 18f.) are not very conducive to a clear understanding of the passage either, I am afraid.

<sup>81</sup> One should be aware that to Antisthenes, λέγειν and ἀντίλεγειν are primarily about naming and bringing up some thing for discussion. The gist of any objection of this Cynic to his interlocutor is 'what are you talking about, man?', rather than 'I am afraid, in stating this you are wrong, sir'. It may be recalled *ad nauseam*: categorization is not statement-making.



falsely'), this is, still on Antisthenes's assumption, *almost* ruled out, for its occurrence is restricted to making a wrong designation ('appellation'); for instance, when indicating Socrates by a non-quidditative account (e.g. by calling him 'the pale'), the speaker, still on Antisthenes's assumption, uses a false designation, and, accordingly, fails to bring him up.<sup>82</sup>

Once Antisthenes's incorrect view has been discarded, Aristotle advances the correct position:

*Ibid.* 29, 1024b34-1025a1: But with respect to each thing, it is possible to bring it up not only by its proper account, but also by another thing's quidditative account; this may be done falsely, i.e. when taking it [viz. this account] in its perfection; but also in a way truly, e.g. things eight in number may be called 'two things', using the proper account of 'two'.

What Aristotle intends to make clear is not a matter for doubt, yet the precise meaning of his words may raise some questions. First, his use of the word παντελῶς<sup>83</sup> alongside ψευδῶς ('falsely') may give rise to a bit of a problem. The adverb is commonly taken here as 'altogether', which leads to rendering (ignoring the conjunction καί, for that matter) "this (i.e. using another's thing quidditative account) may be done altogether falsely". However, taking the adverb in the sense cognate to the adjective, and καί explicatively, we should instead render Aristotle's words "this may be done falsely, that is (καί), when taking this account in its unadulterated sense". On this rendering, Aristotle's words are more in keeping with his previous exposition.

Another point at issue is Aristotle's example concerning the application of a thing's (viz. the number '2') proper account to describe another thing (viz. the number 'eight'). This sentence is commonly taken for an arithmetical statement: "eight is a double". I would prefer to take Aristotle to speak about *things* that are eight in number, which in a way can be described by using the proper account of 'two'. The eight things indeed can be designated as 'two things' (meaning 'two sets of four things')<sup>84</sup> by using an account that, as its definiens, only falls to 'two', which admittedly is properly defined as 'the double', i.e. of the principle and measure of any counting — of unity.<sup>85</sup>

<sup>82</sup> In *Met.* H 3, 1043b23-32, a cognate view held by the followers of Antisthenes "and similarly uneducated people" will be under examination. See my section 10.4.

<sup>83</sup> Which is the adverb to the adjective παντελής = 'all-complete', 'in pure perfection', used in the sense of its later form παντέλειος.

<sup>84</sup> So correctly Kirwan (180).

<sup>85</sup> For 'one' not being itself a number see my section 12.32.

8. 43 *The role of the λόγος- πρᾶγμα issue in the present discussion*

Before embarking on Aristotle's discussion of 'false man', some remarks should be made about the precise nature of λόγος and πρᾶγμα both of which came to our attention in the foregoing texts.<sup>86</sup>

(1) The λόγος under examination here ('account', 'phrase')<sup>87</sup> is a set of words which is used either as a definiens (in its capacity of being a proper or quidditative account), or as a describens (qua non-quidditative account). Therefore the common rendering 'definition' or 'statement' is inappropriate and bound to lead us astray. In fact, the λόγος as 'account' or 'phrase' should be taken either as a 'state'<sup>88</sup> of the 'man's-being-pale' (or 'Socrates's-being-educated') type, or a 'state of affairs' of the 'that-a-man-is-pale' type; see my next item (2).

(2) Accordingly, λόγος is found in two verbal forms: (a) as the complete 'dictum' ('assertible') of a statement, signifying a state of affairs, i.e. some subject including its being somehow affected (1024b31: αὐτὸ πεπονθός); for example, 'Socrates's-being-seated' (or 'the-diagonal's-being-(in)commensurate'), and (b) as a complex designation or phrase of the 'being-educated' type, to wit, a more than one-word designation ('appellation') not including the substantive noun it is assigned to. Type (a) is instanced at 1024b30-31 ('Socrates-educated'); compare 1015b17ff. and E 2, 1026b17ff., where the same question about denotation ('Does "Socrates" equal "Socrates-educated"?') is in order; see my item (5). An example of type (b) is found at 1025a1 'being double' (διπλασία), taken as an account (λόγος) of what is eight (τὰ ὀκτώ).

(3) The content of the λόγος is the πρᾶγμα ('state' or 'state of affairs', expressed by an incomplete or complete 'dictum' ('assertible'), respectively) of which the λόγος is the verbal representation. While πρᾶγμα may be used to stand for both the thing-somehow-affected present in the outside world and the mental entity (called 'state' or 'state of affairs') referring (truly or allegedly) to this thing-thus-affected, the term λόγος exclusively signifies the mental entity, not the thing of the outside world as such (i.e. irrespective of its being somehow conceived of), as clearly appears from the well-known Aristotelian definition of the truth-value of the λόγος: "It is because the state

<sup>86</sup> For a broader assessment of this issue see my sections 2.22-2.24.

<sup>87</sup> For the other senses of λόγος see my section 3.41.

<sup>88</sup> I use this term in the sense of 'the condition of a person or thing, as with respect to circumstances or attributes', *Random House Dictionary*, 1388b.

of affairs <signified by it> is, or is not, the case that an account is said to be a true one or a false one”.<sup>89</sup> In the definition of ἀληθὺς λόγος, λόγος is the ‘dictum’ (‘assertible’) and πᾶγμα the state of affairs expressed by it. Thus Aristotle can say (*Cat.* 12, 14b19-20) that πᾶγμα in a way (πῶς) is the cause of the λόγος being true or false, to wit in so far as its content (πᾶγμα) is applicable to the outer world.

(4) When claiming (1024b29-31) that each thing’s proper account can be applied to other things, Aristotle is speaking of a (poly-assignable) account of the incomplete assertible (or semantically, of the incomplete ‘state’ type (my (b))), while his claim that false accounts are always about ‘things-that-are-not’ (1024b26-27 and 31-32) concerns accounts of the complete assertible or state of affairs type (my (a)). Thus if Socrates is walking, the false λόγος of type (a): ‘Socrates’s-being-seated’ is about something that is altogether not the case, while that of type (b), ‘being-seated’ is, in principle, applicable to other things as well.

(5) Not recognizing the possibility of poly-assignable accounts, Antisthenes had ignored the fact that the designation of some thing (‘Socrates’) and that of the same thing somehow affected (‘educated-Socrates’) equally denote the same ‘thing’, so that the two designations “in a sense are the same” (ταὐτό πῶς, 1024b30). In modern terminology, though formally different, they are the same referentially (or: by themselves, they ‘signify’ or connote different things, but when used in a certain context they actually denote one and the same thing).

(6) Opposing his view of the appropriateness of non-quidditative accounts to Antisthenes’s radical rejection of that idea, Aristotle says (1024b34-36) that each thing can be called up for discussion not only by its own proper account, but also by that of another thing. The example he gives us shows that we should not understand by ‘another thing’ some other physical thing, but another quiddity, inhering in other things as their quidditative constituent, on the proviso that the thing to be called up actually possesses this quiddity as a coincidental one. Thus a house-building poet may not only be designated by his own proper description saying ‘this two-footed rational animal’, but also, by using that of other entities like ‘house-building’ or ‘poetry’, be called ‘this expert in the art of rhythmical composition’, and even ‘this expert in the art of house-building’.

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<sup>89</sup> *Cat.*, 5, 4b8-10; 12, 14b21-22.

To proffer this semantic view in the present context is not to be regarded as just a random argumentative move against Antisthenes. Just as in his *Sophist*, Plato countered Antisthenes's and other opponents' misconceptions about language and speech by unfolding his own semantics, so does Aristotle in facing those people.<sup>90</sup> As a matter of fact, it is precisely this semantic rule of his that is of paramount importance in Aristotle's standard lore of focalization and categorization, which we will find successfully applied in the central part of the *Metaphysics*, as well as in his expositions of the major themes of *Physics*.<sup>91</sup>

#### 8. 44 *The exposition of ψευδός continued*

Let us now return to Aristotle's exposition of ψευδός. In the last paragraph (1025a1-13) Aristotle comes to speak about another use of the adjective ψευδής occurring in the phrase 'false man'. Aristotle describes him, as may be expected in this context — in connection with the foregoing discussion of the false λόγος — by saying that he is a man who "uses such accounts recklessly and deliberately, for no other reason but for their own sake". In the second part of his description, there is a clear link with the section on false πράγματα. The false man is said to be "one who makes such accounts arise in other people; in quite the same manner as we say *states* (πράγματα) are false which create a false appearance".

The paragraph winds up with a short discussion of Plato's deviant use of the phrase 'false man' in the *Hippias minor*.<sup>92</sup>

#### 8. 5 'What-is' taken as 'what-is-qua-true' in *Met. E 4*

'What-is' in the sense of 'what-is-qua-true' (τὸ ὡς ἀληθὲς ὄν) is dealt with together with its counterpart, 'what-is-not' qua 'falsehood' (τὸ μὴ ὄν ὡς ψευδός). What must strike the reader in the first place is that

<sup>90</sup> For Plato see De Rijk (1986), 254-354.

<sup>91</sup> See my sections 12.31-12.39.

<sup>92</sup> 365A-371E. This discussion is commented upon by Ross and Kirwan *ad loc.* Incidentally, at 1025a11 the proper meaning of μιμεῖσθαι is clearly evidenced, being 'to represent', rather than 'to imitate', because the *action* of limping is represented, not imitated. See Kardaun (1993) and (2000), 137-43. For the massive impact of a correct (or incorrect, for that matter) interpretation of μίμησις and cognate terms upon our view of Plato's attitude towards art and artists see Kardaun (2000), 143-63.

while, as in Δ 29, ‘what-is-not’ is characterized by Aristotle by an expression containing the substantive noun ψεύδος (‘falsehood’), the opposite notion ‘what-is’ is indicated by using the substantivated neuter adjective ἀληθές (‘something true’). Why should not ‘what-is-not’, when opposed to ‘what-is’ in the sense of ‘what-is-qua-true’ be designated as ‘what-is-not-qua-false’, instead of ‘what-is-not-qua-falsehood’? For one thing, in Aristotle and in Plato as well (e.g. *Cratylus*, 385C16; *Politicus*, 281A13), the substantive τὸ ψεύδος is so often opposed to the substantivated adjective τὸ ἀληθές that it makes the former seem to be used as an adjective; in point of fact, there is no occurrence of the substantivated adjective τὸ ψευδές in Plato and Aristotle, or in any of the other authors of the classical period.<sup>93</sup> I think the question could surely be put the other way round: why does Aristotle not use the substantive ἀλήθεια? It is best to answer this question at the end of our discussion.

#### 8. 51 *On the notions ‘is-true’ and ‘is-not-true’ in Met. Δ 7*

It is profitable to take into consideration what the Lexicon (*Met.* Δ 7) tells us about this sense of ‘what-is’-in-the-unqualified-sense’. The few lines devoted to this third sense, viz. ‘be’ and ‘is’ qua ‘is-true’, are noteworthy:

*Met.* Δ 7, 1017a31-35: Again, ‘be’ and ‘is’ have the meaning ‘it is true’, and ‘not be’ ‘it is not true, but a falsehood’, and this alike in the case of affirmation and of negation. For instance, ‘Is: [(Socrates&educated)’s be-ing]’ means that this is true; or ‘Is: [(Socrates&not-pale)’s be-ing]’ means that it is true. And as for ‘Is not: [(diagonal&<<commensurate)’s be-ing]’, this means that it is a falsehood, or ‘Is not: [(diagonal&not>> incommensurate] ‘s be-ing’, that it is a falsehood.

This rather cryptic passage requires some philological comments. It must draw the reader’s attention to the fact that the case of ‘being qua truth’ (‘is’) is instanced by two examples — one with an affirmative assertible, the other with a negative one — while in order to illustrate the case of ‘non-being qua falsehood’ (‘is-not’), the Greek text, as it is commonly read, offers only an example concerning the affirmative assertible, and fails to give an example of the negative one. As a matter of fact, all our manuscripts (including the lost one that was used by William of Moerbeke) read οὐκ ἔστιν ἡ διάμετρος ἀσύμμετρος, meaning: ‘is not <the case> that the diagonal

<sup>93</sup> Liddell & Scott s.v.

is incommensurate'. Because of the inadequacy of this sentence, all modern editors and commentators read, in the wake of Bonitz (supported by Alexander *ad loc.*), σύμμετρος instead of ἀσύμμετρος, and take Aristotle to have left the fourth case ('non-being qua falsehood' concerning a negative assertible) uninstanced.

However, the logical balance of the text and the unanimous manuscript readings can be adduced in support of the assumption that the extant Greek text has suffered from haplography caused by the twofold occurrence of (ἀ)σύμμετρος, and should be read τὸ δ' οὐκ ἔστιν ἢ διάμετρος (σύμμετρος ὅτι ψεῦδος, ἢ ὅτι οὐκ ἔστιν ἢ διάμετρος οὐκ) ἀσύμμετρος ὅτι ψεῦδος. The surmise that, as a result of haplography, there is something wrong with the text as handed down finds some additional support from the reading found in the so-called *Translatio anonyma*.<sup>94</sup> In my translation and presentation I have emended the supposed haplography.<sup>95</sup>

#### 8. 52 *The anatomy of the apophantic expressions instanced*

Apart from this philological deficiency, our passage calls for some remarks concerning its doctrinal content. First, there is the use of ἔστιν emphatically placed at the beginning of the sentence to draw our attention; further, what could be meant by the concluding sentence: "And this alike in the case of affirmation and of negation" (1017a32-33)?

<sup>94</sup> The 'translatio anonyma sive media' was edited from a number of thirteenth-century MSS by Gudrun Vuillemin-Diem, who forwarded some good reasons to date it as early as before the end of the twelfth century (*Praefatio*, p. XXII-XXIV). At 1017a34-35 it has (p. 95<sup>5</sup>): "non est autem diametrum non commensurabile quia falsum" (where the second 'non' has only been omitted by one MS, Vatican, *Pal. lat.* 1063), which suggests that, unlike our MSS and William of Moerbeke's, the Greek text the author of this Latin translation had at his elbow left out the third example, not the fourth, as the other MSS did. Interestingly enough, Thomas Aquinas (*In Arist. Met. expos.*, sect. 895) comments upon the sentence under discussion: "Et similiter dicimus quod 'non est diameter incommensurabilis lateri quadrati' quia hoc est falsum, scilicet non esse ipsum non commensurabilem" (ed. Spiazzi; *punctuation mine*).

<sup>95</sup> Things are further complicated though, because at  $\Theta$  10, 1051b20-21, the affirmative expression 'the-diagonal's-being-incommensurable' seems to be an instance of separation, not combination. At *An.* III 6, 430b1-4 it is claimed that "falsehood always lies in the process of combination: for the formula 'the-white-being-not-white' has combined 'the-not-white' <with 'white'>. It is equally possible to call the whole formula a separation".

Kirwan has rightly observed (146) the emphatic positioning of ἔστι ('is') and οὐκ ἔστι ('is not') at the beginnings of the above sample sentences, but his comments are — not unusually, for that matter — somewhat critical, in that he views this use as merely an oddity on Aristotle's part:

"Whatever the explanation of this oddity, its effect is to destroy the value of the examples as illustrations of a separate sense of 'is'. For the fact that '*x is F*' means the same as '*it is true that x is F*', and '*x is not F*' as '*it is false that x is F*', can have no tendency to show that 'is' can mean the same as 'is true', or 'is not' as 'is false'."

By doing so, Kirwan throws away any chance to arrive at the correct interpretation of this passage, which is of real significance for our understanding Aristotle's view of the anatomy of the statement-making utterance.

Ross (I, 308), on the contrary, does take Aristotle's words seriously and makes a reasonable attempt to explain the emphatic position of ἔστι and οὐκ ἔστι:

"Evidently then an ordinary sentence of the type '*A is B*' can hardly be used to illustrate this third sense, since it must be an instance of either the essential or the accidental sense. What we want is a proposition in which the truth or the falsity of another proposition is stated, and such propositions we find in those of the form '*A is B*', '*A is not B*', where the ordinary proposition '*A is B*' is pronounced true or false. That this is what Aristotle has in mind is indicated by the emphatic position of *esti* and *ouk esti* in ll. 33-35".

Ross was surely on the right track. Let me rephrase the nucleus of his comments this way. The emphatic position of ἔστι and οὐκ ἔστι shows that these verbs should be taken as an assertoric operator ranging over an assertible (or 'argument').<sup>96</sup> For that matter, Kirwan too is aware that it was common Greek idiom to use ἔστι and οὐκ ἔστι in the sense of (the operators) 'is-the-case' and 'is-not-the-case', respectively.<sup>97</sup> As for the use of the conjunction ὅτι ('that') preceding

<sup>96</sup> For the term 'assertible' see my sections 2.13-2.14 and 2.16. In this context, the term 'argument' is used in its logico-mathematical sense of 'variable of a function'; this sense comes close to 'argument' = 'subject matter', 'theme', and 'summary of the contents of a book or play'. The contents of Ross's "ordinary proposition" is what is here identified as 'dictum' or 'argument'.

<sup>97</sup> For this use of εἰμί said of circumstances and events see Liddell & Scott, *s.v.* A I 2. Compare Philoponus CAG XIII-2, p. 380<sup>4-12</sup>, where he explains (re *APr.* I 46, 52a28) that Alexander argued the equivalence of ἔστι and ἀληθές. It is clear from the context that there is talk of ἔστι being taken as the assertoric operator: τὸ γὰρ ἀληθές, φησί, τῷ ἔστιν ὁμοίως τάττεται, τουτέστιν ἰσοδυναμοῦσι ταῦτα ἀλλήλοις ὥστε ἀντιλαμβάνεσθαι εἰς ἄλληλα καὶ τίθεσθαι ἀντὶ τοῦ ἔστι τὸ ἀληθές'.

the first two examples (viz. the first occurrences of ὅτι at a33 and 34), it is to be taken as introducing a formula or quotation, in which case it is equivalent to our use of inverted commas.<sup>98</sup>

Ross has well observed that the phrase “and this alike in the case of affirmation and of negation” (1017a32-33) is about the assertible, not the assertion and denial accomplished by the operators ‘is’ and ‘is not’, respectively. Therefore the rendering ‘negation’ (Ross) should be preferred to ‘denial’ (Kirwan). For that matter, a denial is involved as well, viz. that found in the negative operator ‘is not’, which acts as the counterpart of the affirmative operator ‘is’.

A final remark about my supplementing, by the participle ‘being’, the nouns indicating a property, such as ‘educated’ or ‘pale’. As has been shown earlier,<sup>99</sup> in Aristotle’s semantics, i.e. in his protocol language (representing his deep structure analysis), all substantive and adjective nouns are taken to be significative of a mode of what I have termed ‘connotative being’, to the effect that e.g. the meanings of ἄνθρωπος or λευκός, when these terms are actually used referentially,<sup>100</sup> equal ὢν ἄνθρωπος (‘man-being’ or ‘being-a-man’), and ὢν λευκός pale-being’ or ‘being-\*a-pale’).<sup>101</sup>

#### 8. 53 *On the purport of chapter E 4*

We shall return now to the discussion of ‘what-is-qua-being-true’ and ‘what-is-not-qua-falsehood’ found in *Met.* E 4. Now that ‘being coincidentally’ has been discarded (in E, chs. 2-3) as a genuine candidate for the proper οὐσία looked for, the only aim of this short chapter is to make clear that being taken in the present sense ‘being qua truth’ cannot be regarded as a serious claimant for being the proper object of metaphysics either, since it is only concerned with mental operations and things conceived of, not with things in the outside world as such. This is made clear to us in a manner that will leave no doubts about the true nature of this kind of ‘what is’ and ‘what is not’.

<sup>98</sup> Liddell & Scott *s.v.* II: “ὅτι is frequently inserted pleonastically in introducing a quotation (where we use no conjunction and put inverted commas)”. The third example (at 1017a34-35) is, significantly, preceded by the definite article τό.

<sup>99</sup> My section 1.64; also 9.35.

<sup>100</sup> *Int.* 1, 16a13; cf. 3, 16b19.

<sup>101</sup> My section 1.64. It should be recalled in this connection that in Greek the contradistinction between substantive and adjectival nouns is remarkably looser than in modern languages; see Ruijgh (1979), 70; 81, n. 36; and Whitaker (1996), 54, n. 40.



## 8. 54 'What-is-qua-true' as basically being a mental construct

As early as in the opening lines of this chapter, it becomes quite obvious that what-is-qua-true and what-is-not-qua-falsehood are concerned with mental operations, namely, what is commonly called 'combination' (σύνθεσις) and separation (διαίρεσις).<sup>102</sup> Applying our findings about Aristotle regarding the formula 'is' as the assertoric operator 'is-true' (or 'is-the-case' or 'obtains'), and its counterpart 'is-not' as the operator 'is-not-true' etc., our translation of the introductory part of this chapter will run:

*Met.* E 4, 1027b18-23: What-*is*-as-true and what-*is-not*-as-falsehood depend on combination and separation. And taken as a whole (τό δὲ σύνολον), <these two are concerned with> the apportionment of <the members of> a pair of contradictories; for 'is true' has the assertion in the case of the combined state of affairs [which is expressed by one member of the contradiction], as well as the denial in the case of the separated state of affairs [expressed by the other member], while 'is false' has the opposite of this apportionment.

This passage provides scope for careful examination.

(1) The first sentence represents the common Aristotelian doctrine that there is no truth or falsity without there being a combination or separation of what in *De interpretatione* is called 'thoughts'.<sup>103</sup>

(2) At 1027b19-23, the apportionment of truth and falsity to the respective members of a contradiction is explained. As we have seen before,<sup>104</sup> the members of a pair of contradictories are best taken as two contradictory states of affairs (more precisely, assertibles), expressed (in the surface structure) by infinitival phrases or 'that-clauses'. Let us label the affirmative (= 'combined') one, (A), and the negative (= 'separated') one, (B). E.g. the assertibles:

(A) 'Is: [(Socrates&pale)'s be-ing]' as opposed to (B) 'Is not: [(Socrates&pale)'s be-ing]'

which have as their counterparts

(A) 'Is: [Socrates&not-pale]'s be-ing]' as opposed to (B) 'Is not: [(Socrates&not-pale)'s be-ing]'.<sup>105</sup>

<sup>102</sup> My section 2.3.

<sup>103</sup> *Int.* 1, 16a11ff.; see my sections 2.32 and 3.22-3.24.

<sup>104</sup> My section 3.76.

<sup>105</sup> For the combined 'true' state of affairs expressed with a negated attribute, see *Met.* Δ 7, 1017a32-b1; my sections 8.22-8.23.

The appointment is described in terms of entailment: the operator 'is-true'<sup>106</sup> 'affirms' (A), i.e. assumes it to apply to the outside world, and, accordingly, denies (B); while 'is-not-true' goes the other way round, by denying (A) and, by the same token, affirming (B). This entailment is based upon the law of excluded middle (LEM), which states that it is not possible that there should be anything in between the two parts of a contradiction, while it is necessary either to assert or to deny any one thing of one thing.<sup>107</sup>

(3) The terms συγκείμενον and διηρημένον are commonly taken as referring to states of affairs (πράγματα) actually occurring in the outside world; in our example, Socrates's factually being pale in reality. However, in the next lines (1027b25-31) the πράγματα involved will definitely be denied factual existence. Moreover, if Aristotle had factual states of affairs in mind, how are we to explain 'negative states of affairs' like Socrates's-not-being-black or his-not-being-a-stone,<sup>108</sup> let alone πράγματα such as Socrates's-being-an-ass. On the other hand, whoever rules out impossible states of affairs burdens Aristotle's theory of statement-making with an unpleasant restriction. Anyway, Aristotle does not mention the case in which the phrase 'is-true' denies the affirmative πρᾶγμα, Socrates's-being-a-stone, and affirms its divided counterpart Socrates's-not-being-a-stone.

(4) Quite in line with the foregoing observations, we should take the samples of the 'Is-true' group (= A) as assertibles that are *stated as* true, and, accordingly, those of the 'Is-false' (B) group as assertibles that are *stated as* false, irrespective of whether the truth-claim is legitimate or not. As a consequence, that being taken in the sense of 'being-stated-as-true', which is at the focus of Aristotle's attention in this chapter, does not qualify for True being as looked for by Aristotle in the *Metaphysics*, is clear enough, since what only has mental existence should be dismissed as a candidate for being the true οὐσία (see my section 8. 62).

(5) All this suggests that at 1027b21 the words κατάφασις and ἀπόφασις refer to the assertion and denial conveyed by the operators

<sup>106</sup> The Greek has τὸ ἀληθές, which presumably should be taken as (or read?) τὸ ὡς ἀληθές ὄν = 'what-is-qua-true'.

<sup>107</sup> *Met.* Γ 7, 1011b23-24; my section 7.5.

<sup>108</sup> *Pace* Whitaker, who does not seem to be worried at all about such things, thinking indeed (1996, 27) that to Aristotle, "there are [...] real non-entities in the world". What are we supposed to understand by 'real non-entities' and by 'world', then?

‘is-true’ and ‘is-not-true’ respectively, rather than the affirmation and negation involved in the assertibles of the (A) and (B) groups.<sup>109</sup>

(6) Common Greek presents us with an interesting parallel of this use of ‘be’ to designate claimed or putative truth. Thus Herodotus twice uses (I, 95 and I, 116) the expression τὸν ἔοντα λόγον for ‘the true story’.<sup>110</sup>

In the remainder of the chapter it will become still more manifest that, contrary to the common view,<sup>111</sup> there is no talk about how things truly are, but how people think or claim (by asserting or denying) that things truly are, or are not. For instance, when someone states that Socrates is seated as something-being-true, whether he is right or wrong in doing so, the assertoric operator ‘is true’ (or ‘is the case’) is attached to the expression signifying the state of affairs ‘Socrates’s-being-seated’; and if he states it as false (‘not-being’) the negative operator ‘it-is-not-true’ is attached to the expression, or the affirmative one to the same expression negated by separation (‘Socrates’s-not-being-seated’). Thus the truth (or rather the ‘being qua true’) under consideration is that involved in the actual truth *claim*, just as the falsehood (or rather the ‘being qua falsehood’) is the one involved in the actual rejection of the truth *claim*. Again, whether or not this ‘being qua true’ or ‘non-being qua falsehood’ is *correctly* claimed or denied is out of the question — as is usual with claims, since no claim is *eo ipso* a legitimate claim. Likewise, as is quite obvious, there is an important formal difference between ‘to assert something to be true’ and ‘to say something true’ or ‘to speak truth’.<sup>112</sup>

#### 8. 55 *The ‘what-is-qua-true’ dismissed*

Now that the foregoing position has been firmly established, Aristotle only needs to make two more steps in order to put aside ‘what-is-stated-as-true’ as a candidate for being the proper object of metaphysics. He has to properly define, first, the mental acts of ‘combining’

<sup>109</sup> Compare the definitions of κατάφασις and ἀπόφασις in *Cal.* 10, 12b6-10 (my section 2.21).

<sup>110</sup> For other similar uses see Liddell & Scott *s.v.* εἰμί A 3, and my sections 1.5 and 1.6.

<sup>111</sup> Wolff rightly stresses (1999, 43-5) that in *Met.* E 4 truth is taken as a mental construct. However, his mistaking πράγμα for ‘real thing’ forces him to oppose (50ff.; 59-63) ‘chose fausse’ to ‘énoncé faux’, which causes him to land in needless difficulties of interpretation.

<sup>112</sup> See my sections 3.3 and 8. 62.

and 'separating'; and then, to show that what has been defined at 1027b18-23 as the third type of being is not concerned with Truth in the sense of Reality (ἀλήθεια), but that which is 'stated as true' (ὡς ἀληθές). To put it otherwise, what the entire chapter is all about is not truth itself, but truth claims as actually brought forward in assertions about the things-that-are.

A short remark (1027b23-25) is inserted about what we have to understand by the mental acts of 'combining' and 'separating'. They are characterized as 'thinking together' and 'thinking apart', respectively:

*Met.* E 4, 1027b23-25: How we come to conceive things together or apart is another question;<sup>113</sup> by 'together' and 'apart' I mean not in succession but so as to make up some one thing.

Tredennick<sup>114</sup> is grossly confused in contending that to think things apart comes down to thinking them "not as a unity but as a succession".<sup>115</sup> Ross (I, 365) has well observed that in fact, 'thinking together' is implied in the affirmative assertible, while 'thinking apart' is in the negative one.

Kirwan's comments on the parenthesis (1027b23-25) betray more confusion on his part, which has been caused by his misunderstanding the structure of the Aristotelian statement-making utterance. He is of the opinion (199) that Aristotle fails to clearly distinguish between

(1) a thought of 'pale-Callias', and

(2) the thought 'that-Callias-is-pale',

and that Aristotle's mode of expression invites a confusion between (1) and (2), "from which, perhaps, he was not himself free". If only Kirwan had responded to the invitation to take Aristotle's words as they stand without being prejudiced by modern views, he could have realized that in Aristotle's protocol language, an elementary sentence of the dyadic form commonly analysed in traditional logic as 'S is P'

<sup>113</sup> This is dealt with in *An.* III, chs. 2, and 6-7.

<sup>114</sup> (1933), 306, in a footnote to his translation of 1027b24-25.

<sup>115</sup> Kirwan (199) is of the opinion that it is Aristotle who should be charged with a view just as erroneous as Tredennick's, because it is due to a "confusing feature of the parenthesis in its use of 'together' [...] in contrast with 'separately', which makes it seem as if one who thought two things separately would have to think them in succession". I cannot see why; even less so indeed, as Kirwan continues by saying that "*of course*, (italics mine) by thinking separately Aristotle here means having a negative belief".

(Ross's 'ordinary proposition' 'A is B') has a monadic 'deep structure'<sup>116</sup>:

'Is: [assertible]'

to the effect that the state expressed by the complex term (e.g. 'pale-Callias' or 'Callias's-being-pale') is semantically identical with the state of affairs of the assertible form ('*that*-clause') 'that-Callias-is-pale'. Hence a sentence (statement) is accomplished by prefixing the assertoric operator 'is' (= 'is true', 'is the case', 'obtains'), or 'is not' ('is not true' etc.) to any one of these two formulas.<sup>117</sup>

Next, the possible claim of 'what-is-stated-as-true' to being considered the proper subject of metaphysics is weakened further, this time by laying bare its mental nature, and shedding light on its coincidental link, so to speak, with the outside world. Now that it has been firmly stated in the preceding lines that 'what is stated as true' is only concerned with the mental operations of 'combining' and 'separating', Aristotle goes on to deal with the precise nature of that which is mentally combined (τὸ συγκεείμενον; 1027b21) or separated (τὸ διηρήμενον, b22) whenever a state of affairs is subjected to assertion or denial.

His initial claim (1027b25-27) has provoked quite a lot of confusion among modern translators and commentators, altogether owing to their mistaking πράγματα for 'actual things' taken as occurring in the outside world.<sup>118</sup> As has been shown before in our discussion of Δ 29 (my section 8.21), πράγμα stands for the mental entity 'state' or 'state of affairs', which, being the objective content of its verbal counterpart, the λόγος, can be applied (whether truly or falsely) to something occurring in the outer world. The λόγος, accordingly, can be true or false, depending on its matching or not matching reality.<sup>119</sup> No doubt, it would be too subtle — and, what is more important, blatantly at variance with one of the main rules of Aristotelian semantics — to assign truth and falsehood to the λόγος, which is, in

<sup>116</sup> For my use of this label, as far as Aristotle is concerned, see my section 1.22.

<sup>117</sup> See De Rijk (1987), 43-7; (1996), 131-3. At *Met.* Z 12, 1037b11-27, a nice exposition is found of the background of the anatomy of Aristotle's copula-less assertion, having the deep structure 'Is: [assertible]', which is quite different from the later 'S is P' copula construal.

<sup>118</sup> So Ross I, 344f.; 364; Kirwan, 178-179; 198-200; Tredennick, 307; Warrington, 160; 235; Reale, 498. Naturally, again in accordance with basic semantics, πράγματα may be *applied* to the outside world and, may *refer*, then, to outside things, but still those *as conceived of*, including their modifications ('appurtenances').

<sup>119</sup> *Cat.* 5, 4b8-10; 12, 14b21-22; *Met.* Γ 7, 1011b26-27.

fact, a verbalized  $\pi\rho\acute{\alpha}\gamma\mu\alpha$ , *and* to deny them to the  $\pi\rho\acute{\alpha}\gamma\mu\alpha\tau\alpha$  at the same time. This is, of course, not what Aristotle has in mind in our passage. What he means to say is that being-true (i.e. 'what is' in the sense of 'stated-as-true') is not found in the  $\pi\rho\acute{\alpha}\gamma\mu\alpha\tau\alpha$  as a steady property of their own — as is not so in the  $\lambda\acute{o}\gamma\omicron\iota$  either, for that matter —, but entirely depends on our mental activity concerning the combined or divided assertibles, namely the act of asserting or denying expressed by the assertoric operator 'is' or 'is-not'.

It is along this line of thought that we should understand the opposition between truth and falsehood on the one hand, and the properties 'good' and 'bad' on the other. The latter *are* properties that intrinsically inhere in things (including  $\pi\rho\acute{\alpha}\gamma\mu\alpha\tau\alpha$ , to be sure, such as 'to-be-just' or 'to-be-unjust', respectively):

*Ibid.* 4, 1027b25-27: For falsehood and being true are not in states (of affairs) somehow in the sense that<sup>120</sup> *eo ipso* (εὐθύς)<sup>121</sup> what is good would be something true, and what is bad a falsehood — but in discursive thought (ἐν διανοίᾳ).

The comparison of 'being-true' and 'being-false' to 'being-good' and 'being-bad', respectively is not at random, for that matter. As Aristotle remarks more than once, from the ontological point of view, being is essentially associated with 'being-good'.<sup>122</sup> But the fact that this ontological close relationship does not hold in the case of 'being-stated-as-true' makes particularly clear that rather than the ontological, the mental (or logical) domain is under consideration here. For instance, the state of affairs that Socrates did not die after drinking the hemlock can be asserted to be false, saying e.g.: 'Socrates's having-reached-the-age-of-90 is false'. However, this 'false thing' (or rather this-thing-stated-as-false) is as such not a bad 'thing', rather a desirable good. Thus the metaphysical adage equating 'ens = verum = bonum' appears not to hold in so far as 'being *stated as* true' is concerned. Hence the difference between the mental domain of 'being-stated-as-true' and the categorial realm of real things is patently clear. Putting it differently, in spite of the fact that both ἀλήθεια and ψεῦδος have ontological connotations, the ὥς device in the

<sup>120</sup> For this rendering of οἶον in the sense of οἶοει (Latin 'quasi') cf. Bonitz, *Index* 501b53-502a1.

<sup>121</sup> Cf. the use of ἤδη; see my *Index* s.v.

<sup>122</sup> Cf. *An.* III 7, 431b10-12: "What does not involve action, i.e. the true or false, belongs to the same sphere as what is good or evil, but they differ in being respectively related to a universal or a particular state of affairs".

formulas τὸ ὡς ἀληθὲς ὄν and τὸ μὴ ὄν ὡς ψεῦδος serves to confine them to the mental domain of belief and assumption.

The statement about our manner of thinking leads the author to briefly bring to the reader's attention that, as far as the mental act of simple apprehension is concerned, which admittedly precedes any act of combining or separating, truth and falsity are not even in discursive thought (διάνοια), but, as we will be taught later,<sup>123</sup> in intuitive thinking only (νοῦς):

*Ibid.* 4, 1027b27-29: But with regard to simples, i.e. the what-things-are, they are not even in discursive thought. All the items we have to study with regard to what-is and what-is-not in the manner of the simples will have to be investigated later.

The decisive conclusion can now be drawn.<sup>124</sup> It is clear that both coincidental being and being qua truth should be discarded as applicants for being the proper object of metaphysics, so that there is room for 'what-is-in-the-full-sense', viz. the kind of being that is expressed by the ten figures of appellation ('categorization').<sup>125</sup> For in fact the two rejected competitors are themselves, each in their own way, concerned with the remaining candidate, categorial being, which alone bears on the things-that-are in the full sense. Therefore the metaphysician, who seeks the causes and origins of true being, must investigate the outside things qua things-that-are according to the various figures of categorization in which they are brought up for investigation.<sup>126</sup>

*Ibid.* 4, 1027b29-1028a4: But since the act of combining (συμπλοκή)<sup>127</sup> is in thought (ἐν διανοίᾳ), not in things (ἐν τοῖς πράγμασι),

<sup>123</sup> *Met.* Θ 10, 1051b17-1052a4.

<sup>124</sup> As for the grammatical construction of this chapter, the sentence (1027b18-29) containing the causal conjunction ἐπειδὴ (at b19), ends as an anacoluthon, and is followed by another causal sentence which, recapitulating the previous one (b29-33), introduces the apodosis containing the statement which Aristotle properly wants to make.

<sup>125</sup> Cf. *Met.* K 8, 1065a21-24: "What-is-stated-as-true [...] depends on a connection in thought and is an affection of thought, and that is why the principles <of 'what is'> are not sought with respect to what *is* in this sense, but concerning that which *is* outside and independently". In *Phys.* V 1, 225a20-26 and *Met.* K 11, 1067b26-27 'what-is-not' is discarded from Change in a similar way.

<sup>126</sup> Kirwan has well observed (76; 200) that the *qua*-functor indicates under which of the ten categorial descriptions an object is identified, and so properly speaking modifies the investigation.

<sup>127</sup> Our two oldest MSS add ἡ διαίρεσις, whereas the Laurentianus (s. XII) reads καὶ ἡ διαίρεσις. However, the odd position of these phrases after the verb ἐστίν, as well as its association with συμπλοκή instead of its usual counterpart σύνθεσις, suggest that they were later on inserted.

and that which is in the manner of 'what is stated as something true' is a different thing-that-is from those that *are* in the full sense — for it is thought only<sup>128</sup> which puts together (συνάπτει) or takes away (ἀφαιρεί)<sup>129</sup> either what a thing is, or how qualified, or of what quantity or whatever else it may be<sup>130</sup> — therefore that which *is* as coincidental and that-which-is-stated-as-true must be discarded. For the cause of the former is indefinite and that of the latter is a certain affection of the thought, and both are concerned with the remaining kind of 'thing-that-is' and do not indicate any natural entity being outside [i.e. independent of thought]. Therefore let these be dismissed, and let us investigate the causes and origins of that which *is* itself, and this qua thing-that-*is*.

We are now prepared to embark on the special examination Aristotle had in mind from the outset, which is actually found in the central books of *Met.* ZHΘ. But before we do, we have to deal with the question we asked before (above, p. 136) about the strikingly different grammatical ways in which the notions 'truth' and 'falsehood' are expressed. Given that the phrase 'what-*is*-as-true' as well as 'what-*is*-not-as-falsehood' refer, as such, to mental entities (thoughts), not to things in the outside world, the substantive noun ἀλήθεια, which throughout Greek thought refers to Reality as opposed to appearance and things only thought or made up or dreamt up, is of no use at all. Naturally, this does not go for its counterpart, ψεῦδος, which, by definition, stands for what *is not*, either absolutely or in a qualified sense (*Met.* Δ 29, 1024b17-21), and, consequently, lacks any intrinsic ontological connotation.

<sup>128</sup> For the frequent omission of μόνον see Verdenius (1981), 348; 351.

<sup>129</sup> This is the reading of all our MSS. Bonitz, who was followed by Ross, did not adopt it and conjectured διαίρει. They failed to see, however, that Aristotle has subtraction (ἀφαίρεσις) in mind. For ἀφαιρεῖν used to stand for eliminating something in thought (τῇ διανοίᾳ); see *Met.* Z 11, 1036b3 and 23. Its counterpart, which is usually indicated by προστιθέναι (*APo.* II 5, 91b27; *Met.* Z 4, 1030a33; cf. B 4, 1001b8; see also Bonitz, *Index s.v.*), is here expressed by συνάπτειν.

<sup>130</sup> The ten categorial modes of being are intended. For the categories being taken as 'names' or 'appellations', rather than as sentential predicates see De Rijk (1980), 22-31, my sections 4.1-4.2.



## CHAPTER NINE

### THE CLAIMANTS FOR THE TITLE 'TRUE OUSIA' EXAMINED

Books Z and H proceed to carry out the task that earlier was assigned to the metaphysician, to investigate the nature of true substance (Γ 1, 1003a33-b19). These books are commonly taken to be one tract on οὐσία, despite their heterogeneous composition.<sup>1</sup> They clearly make up (with book Θ) the central part of the *Metaphysics*. In Z, Aristotle first argues (ch. 1) that οὐσία is the subject matter to be considered from now on. He then sets out to investigate what precisely should be meant by the term οὐσία, about which different opinions are listed in ch. 2. Should it be equated with 'substratum' (ch. 3), or rather with 'essence' (chs. 4-6 and 10-12)? In chs. 13-16 the wrong views of the nature of οὐσία are got out of the way, and in the final chapter (17), form (εἶδος) will be identified as the true οὐσία. Chs. 7-9 present an intermezzo dealing with the counterpart of 'be' — 'become'. Book H, finally, takes up some points already made in Z, brings (ch. 2) the discussion of εἶδος to an end, and, after some miscellaneous notes on matter (chs. 4-5), also presents a renewed discussion of the problem of the unity of the definiens.

First, the notion οὐσία itself is properly assessed in the framework of the general search for what is in the primary sense of 'be'. Then the claimants whose credentials are not convincing enough come up for discussion, first of all, notably, the substratum and the universal.

#### 9. 1 Οὐσία as the primary sense of 'what is'

In the opening lines of Z 1, Aristotle reminds us of the various ways in which the notion 'be' can be assigned to 'things'. Given the fact that two of them, namely 'coincidental being' and 'being stated as true', have been extracted from the metaphysical investigation into 'true

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<sup>1</sup> Frede & Patzig I, 21-6 and 31-5, who also deal with their position within the whole of the *Metaphysics*, *ibid.*, 27-30. The composition of Z is also frequently discussed by Bostock (71; 119f.; 155; 176f.; 183f.; 204-7; 234-5), but his treatment is strongly influenced by his rejection of the particular status of enmattered forms.

being', it is natural that the only serious candidate left, viz. 'what-is-in-its-own-right', which has been identified as categorial being, should now come up for consideration. This narrowing down of the object domain was clearly introduced in the final part of E 4, where the significance of the two other claimants was described in view of their respective relationships to 'be in its own right'.

The primary sense of 'be' is found in the phrase τὸ τί ἔστι ('the what-(a-thing)-is') in so far as it indicates a thing's οὐσία. The next passage makes it clear that, when using (in the wake of Socrates and Plato, for that matter) the term οὐσία, Aristotle considers it the nominalization of the τί ἔστι formula:<sup>2</sup>

*Met. Z* 1, 1028a10-15: That which *is* is so named in many ways.<sup>3</sup> [...]. On the one hand, the phrase 'that-which-is' refers to what a thing <precisely> is, as well as the particular thing involved, and on the other, it says of what quality or quantity it is; and so for each of the things named by the other categories. But while what *is* is spoken of in these various ways, clearly the primary thing that *is* is what a thing <precisely> is, and this phrase refers to its ousia.

This passage presents in the first place a nice example of what we have introduced as one of the main rules of Aristotelian semantics, viz. the lack of an oppositional distinction between object language and metalanguage.<sup>4</sup> Although this is commonly recognized by modern commentators as a linguistic peculiarity, the lines a 11-12 have caused some confusion. Some of them (*inter alios* Ross *ad loc.*) take Aristotle to speak of two aspects of the notion οὐσία, one the universal quiddity (τὸ τί ἔστι), the other the particular thing (τόδε τι). Frede and Patzig, on the other hand, rightly reject (II, 12-15) the idea that the quiddity referred to here is a universal form, but owing to their mistaking (with Ross and others) the diverse appellations for sentence predicates ("Prädikatsausdrucke"), they seem to have unnecessary difficulties in their arguing (on good grounds otherwise) for the particular status of the enmattered form.<sup>5</sup> However, if (as is

<sup>2</sup> See my section 10. 11 below.

<sup>3</sup> Alternatively: "The term 'be-ing' has several senses". My sections 1.71 and 13.1. That in final analysis, however, the translation "that which *is* is so named in many ways" more closely corresponds to Aristotle intentions than "the word 'being' is used in many senses" appears from the use of the plural at *Met. A* 3, 983a26-27: τὰ αἴτια λέγεται τετραχῶς ("Things brought up as causes are so called in a fourfold way" rather than "The word 'cause' is used in four senses").

<sup>4</sup> My section 1.71, semantic Main Rules RIR and RSC.

<sup>5</sup> Not to mention Patzig's verdict (1979, 40) that our passage testifies to a 'systematic ambiguity' on Aristotle's part. One should distinguish between ambi-

actually the case in Aristotle) these appellations are taken not as sentence predicates, but just ‘names’ that can be used to call up a particular thing, their commonness and being applicable as sentence predicates — for Aristotle, one should take them as ‘attributes’ featuring in an assertible — is left out of consideration and need not present any difficulties.<sup>6</sup>

The diverse figures of appellation (σχήματα τῆς κατηγορίας), which are as many diverse ways of calling up the outside things,<sup>7</sup> serve to name them after their distinct ontic aspects. The most appropriate name is the one that hits the mark in grasping the thing’s quiddity or ‘what-it-precisely-is’ (the so-called ὅπερ ὄν of a thing). This happens, for instance, when we bring up Socrates or Coriscus for discussion by calling them ‘man’ (or a particular whiteness by indicating it as ‘colour’; and so on for the remaining non-substantial categories).<sup>8</sup> His preference for this way of naming is elucidated by Aristotle:

*Ibid.* 1, 1028a15-20: When we call a this (τόδε) [i.e. a particular] a ‘what it is’, we do not call it ‘pale’ or ‘hot’ or ‘three cubits long’, but ‘man’ or ‘god’. And the other things are called beings, owing to their being quantities (or qualities, or affections and the like) of what *is* in this primary way.

Next, the question arises (1028a20-25) whether the names taken from the non-substantial categories are at all suited to bringing up the outside things qua beings, because in point of fact they do not indicate any kind of ‘*be* in its own right’ and cannot *be* themselves apart from what, as their substratum, primarily *is*. Indeed it is this substratum that — informed as it is by the true οὐσία, as will appear

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guity and ambivalence. Ambiguity obscures the meanings of words and phrases by an undecidable ‘either-or’, while ambivalence excludes any strict ‘either-or’; my section 1.72.

<sup>6</sup> Graeser’s critique too (1977, 373, n. 42) seems to ignore the fact that Aristotle is speaking about the different ways in which a thing [*x*] can be addressed *in so far* as it is an F-thing, a G-thing etc., and that Aristotle now focusses on the different states of [*x*] and then on [*x*] in its different states (see the semantic Main Rule RSC; my section 1.71). Celluprica is right in pointing out (1987, 171) that there is no talk of πολλαχῶς λέγεται τὸ εἶναι, but τὸ ὄν (“dove ὄν è nome di tutte le cose”).

<sup>7</sup> Because naming is a semantic procedure and has, as such, nothing to do with syntax, the common rendering ‘figures of predication’ (Ross, Tredennick, Kirwan, Tricot, Reale & Patzig, Bostock) is somewhat misleading, as is the usual interpretation of the bulk of Aristotelian examples clarifying his intentions in terms of statements. See my sections 2.13-2.16. For focalization and categorization playing a crucial role in epistemonik proof as expounded in *APo.*, see my section 2.7.

<sup>8</sup> For the ὅπερ ὄν issue concerning non-substantial forms as well see *Top.* I, 9; my section 5.23. For the use of ὅπερ as *qua*-connective see e.g. *Top.* IV 4, 124a17 and 125a18; 6, 128a35; *Phys.* and *Met. passim*. Bonitz, *Index*, 533b36-534a23.

from the subsequent discussions in Z-H — really *is* and that provides all coincidental forms with being-ness. Again, we are reminded of the preferential position of the first category, 'what is' or τὸ τί ἐστὶ καὶ τόδε τι (1028a11-12) or ἡ οὐσία καὶ τὸ καθ' ἑκάστων (1028a27), i.e. the particular quiddity (form) informing this or that particular thing or, what amounts to the same, the quiddity as enmattered here and now.

Aristotle's explanation has, to begin with, an unmistakable semantic purport:

*Ibid.* 1, 1028a24-29: If anything, it is *the* walking <thing><sup>9</sup> and *the* sitting <thing> and *the* healthy <thing> that *is*. Clearly these *are*, rather<sup>10</sup> <than the coincidental forms>, because what *is*<sup>11</sup> is some determinate thing that underlies them, namely the particular substance which precisely comes to the fore in such an appellation; for one cannot speak of '*the*'<sup>12</sup> good' or '*the* sitting' without implying this.

Further, it cannot be stressed enough that in thinking of 'walking or sitting or healthy things', Aristotle is dealing with particulars, say, Socrates or Callias, named after one of their coincidental features (walking or sitting). Bostock (56), therefore, wrongly opposes 1028a23 ("none of them [i.e. walking, sitting or healthy things] is of a nature to *be* in its own right") to Δ 7, 1017a22-27, where it is stated that an item in any category, including the non-substantial ones, *is* in its own right. What Aristotle means to make clear in our passage is that one and the same particular (subsistent entity, like Socrates and Callias) can be named either in its own right, by focussing on its substantial quiddity, that is, or after one of its coincidental features or quiddities. In Δ 7, on the other hand, he claims that coincidental features too, which are particular instantiations of items from a non-substantial category, can be addressed, each after their own (non-subsistent) quiddity. Thus the phrase τὸ λευκόν ('the pale' <thing>)

<sup>9</sup> Unlike other modern languages, English idiom does not allow the use of substantivated singulars like \*'the walking' or \*'the pale'. The addition of the make-weight 'thing' makes Aristotle's claim seem rather trivial because of the suggested tautological inference 'thing, *ergo* underlying thing or hypokeimenon'. In the Greek text there is only the substantivated neuter form of the adjective, so that the phrase τὸ βαδίζον (\*'the walking') can really be said to *imply* (not, to contain) the notion 'thing'. For the use in English of such "tiresome make-weights" or dummies see Guthrie V, 404, n.1. At times (as in the present passage) I venture to use the ungrammatical \*'the pale' etc., for the sake of philosophic clarity.

<sup>10</sup> Bostock wrongly takes the adverb μᾶλλον with φαίνεται instead of the dominant expression of the sentence — the participle ὄντα.

<sup>11</sup> Note the emphatic use of the verb at the beginning of the sentence.

<sup>12</sup> Bostock wrongly has the indefinite article.

may be used as a coincidental name (κατὰ συμβεβηκὸς λεγόμενον) to stand for a pale-complexioned man, like Socrates, as well as in its own right (καθ' αὐτὸ λεγόμενον), for the property itself, viz. the paleness which inheres in him.<sup>13</sup> Again, the semantic approach should be recognized, meaning that it is not 'things' (such as man, walking, sitting) as such that are the issue, but the diverse ways in which one and the same particular (e.g. Socrates) can be brought up for discussion, i.e. by using different appellations.

Aristotle has good reason to infer that evidently it is owing to οὐσία that also <what is signified by><sup>14</sup> each of the other appellations *is*. Therefore, what primarily *is*, not in a qualified sense, but without qualification (ἀπλῶς),<sup>15</sup> will be οὐσία:

*Ibid.* 1, 1028a29-31: Evidently, then, it is owing to ousia that each of those <others> too *is*. And, therefore, what primarily *is* (τὸ πρῶτως ὄν), — I mean, not, is something, but *is*, without qualification (οὐ τί ὄν ἀλλ' ὄν ἀπλῶς) — will be ousia.

The overall primacy of ousia is elucidated by Aristotle in a fourfold way:

- (a) ousia is primary on account of its subsistence (1028a33-34: "for none of the other things named is independent, but this alone");
- (b) ousia is primary in definition (a35-36: "since in the definiens of everything the definiens of its be-ing must occur", where 'be-ing' refers to the connotative mode of be-ing included in any form; my section 1.64);
- (c) ousia is primary in knowledge (a36-b1: "we think we know a thing most fully when we know what, say, the man or the fire under consideration is, rather than when we know its quality or quantity or place");<sup>16</sup>
- (d) ousia is primary in time, because it can *be* without there being other things; this independence implies logical priority.<sup>17</sup>

<sup>13</sup> The vital role which this primary semantic feature of Greek, including ordinary Greek, plays in Platonic thought is commonly recognized; see Guthrie IV, 119ff.; V, 43ff. and 138; VI, 204; De Rijk (1986), 34-45, and my section 1.71. See also *Top.* I, 9 (my section 5.23).

<sup>14</sup> For Aristotle's use of such elleptical expressions see my section 1.71.

<sup>15</sup> For this use of ἀπλῶς see my section 1.3.

<sup>16</sup> Ross (II, 161) has rightly observed that, at 1028b1-2, Aristotle points out that even things in categories other than substance have a τί ἐστι or quiddity. See my discussion of 1030a17-27 and *Top.* I 9, 103b27-37.

<sup>17</sup> The lines 1028a31-b2 are extensively commented upon by Frede & Patzig II, 19-24.

Hence, in the conclusion of the chapter (1028b2-4), Aristotle comes to ask the everlasting question (ἀεὶ ζητούμενον καὶ ἀεὶ ἀπορούμενον), which reads 'What precisely is that which *is*?' and comes down to asking 'What is ousia?' (τί τὸ ὄν, τοῦτό ἐστι, τίς ἡ οὐσία).

### 9.11 *What is 'primary being'?*

The crucial question then is: what does Aristotle mean in this context by 'primary being' (τὸ πρῶτως ὄν)? Ross thinks that in the notion of the first category, the two notions, 'substance as distinct from attributes' and 'essence of a thing as distinct from its other attributes', are in Aristotle's discussion of ousia "somewhat unsatisfactorily blended" (II, 161). In his comments upon Aristotle's use (at 1028a11) of the two phrases τί ἐστι and τόδε τι, he regards them, as we have already seen, as reflecting the two closely connected sides there are to Aristotle's doctrine of substance. Ross (II, 159f.) is surely right in taking Aristotle's term οὐσία to mean "nothing more definite than 'that which most truly or fully *is*'", and deriving from this focal meaning its use for both *that* in things which most truly is, namely their τί ἐστι (in the sense of 'quiddity' or 'essence'), and *that* among things which *is* itself *par excellence*, because it is in virtue of itself, viz. the τόδε τι or the particular.

Ross's view, however, seems to include the less befitting feature we have already been alluding to before. When (correctly) taking τί ἐστι to refer to a thing's essence, Ross thinks of it in terms of "a universal or a combination of universals"; and, in addition, he takes this 'universality' in the context of sentence predication. This prevents him from recognizing that not only the phrase τόδε τι refers to particular being but its counterpart τί ἐστι as well, since it stands for the *particular* essence inhering in the thing under consideration.<sup>18</sup> That its name may also be applied to other particular instantiations, and, accordingly, may act as the (universal) predicate term of a statement about other particulars is something the logician should worry about, not the metaphysician.

Grammatically speaking, the conjunction καί in the phrase τὸ τί ἐστι καὶ τόδε τι (1028a11) as well as in ἡ οὐσία καὶ τὸ καθ' ἕκαστον (a27) makes the phrases a hendiadys, by whose pregnancy the complex idea of 'particular qua possessing this particular essence' is

<sup>18</sup> The particular status of the enmattered forms is given due attention in my sections 2.71; 9.63; 9.71 and 10.71.

expressed. Thus, properly speaking, there is hardly any ambiguity in this use of οὐσία. Rather, there is ambivalence (my section 1.72, the semantic rule RSC), since notwithstanding the formal distinction between a thing's τί ἐστὶ and τόδε τι, the two notions are so intimately connected to one another that any semantic predominance of one over the other, which could cause some obscurity in matters of ontology, is precluded. The notions of the two components signified by the complex idea are, as it were, 'telescoped' into the notion of 'particular substance'.<sup>19</sup> On this assumption, the two phrases are best interpreted by 'the particular as having this essence' or 'this essence as possessed by this particular'; in both cases the coincidence of the intensional and extensional significates of the terms are of paramount importance. Along this line of thought, Aristotle anticipates, as often happens, his definite view of οὐσία, which arises from his later discussions in Z-H.

This ambivalence of the term οὐσία is commonly observed by modern commentators,<sup>20</sup> but usually regarded by them as a weakness in Aristotle's view of ousia, which (in their opinions) he himself was hardly aware of. In a lengthy exposition on 1028a11-12, Frede & Patzig (II, 11-5) rightly explain the phrase τὸ τί ἐστὶ καὶ τόδε τι in light of the particular (or individual) status of the enmattered form; but their exposition is seriously obscured, I take it, by their confusing naming ('designation', 'appellation') with sentence predication. Owing to their lumping these tools together, they insufficiently mark off logical universality from ontological individuality.

Bostock (54) believes that what he regards as the main problem for the interpretation of Z 1 is addressed here for the first time: Is it, he asks himself, using the well-known distinction of the *Categories*, primary substances, or secondary substances, or both, to which Aristotle wishes to attribute the primary kind of being?. From the last sentence of this paragraph Bostock deems it natural to infer that it is primary substance that Aristotle has in mind. On the other hand, although one might allow primary substances to be included under the general heading 'what-a-thing-is', in view of Aristotle's tendency to use this expression as a label for the category of substance as a whole, we are still offered a reason, Bostock thinks, for saying that 'what-a-thing-is' signifies substance, and this reason very clearly focuses on the role of secondary substances. To Bostock, this makes it very

<sup>19</sup> De Rijk (1980), 24.

<sup>20</sup> Ross and Bostock *ad loc.*; Owen (1978-79), 2f.; Burnyeat (1979), 1.

difficult to maintain that Aristotle means to focus exclusively on primary substances, but we *could* suppose that throughout the whole passage Aristotle is thinking of secondary substances.

Bostock's attempt to interpret our passage in light of the distinction made in *Cat.* 5, 2a11ff., between primary and secondary substance can only lead to much confusion (as his own exposition testifies to), let alone that the main problem of Z 1 could be elucidated in terms of that distinction. The distinction made in the *Cat.* between 'primary substance' (i.e. the particular instance possessing a substantial form) and 'secondary substance' (i.e. the particular instantiation of a substantial form itself) is not found here nor alluded to (nor anywhere else in the *Metaphysics* or Aristotle's other works). Although in the chapter under discussion the formal distinction is found between what in *Cat.* is opposed as 'primary' and 'secondary' substance, viz. *τόδε τι* and *τί ἐστι*, it appears time and again that the formal distinction between what is signified by these terms is of little importance compared to the comprehensive notion of οὐσία that is at the focus of interest now. As for the phrase *πρώτη οὐσία* as used in *Met.*, it will become clear that it refers to the 'immediate' or 'first-named' specific quiddity as enmattered in a particular, and, at the same time, this particular qua possessing this specific quiddity.<sup>21</sup>

Yet another peculiarity of Aristotle's view of οὐσία deserves our special attention. Evidently, in this chapter Aristotle is discussing the crucial difference between appellations taken from the first category ('subsistent entity') and those taken from one of the non-substantial categories (at 1028a13 called *κατηγορούμενα*). Here, as in many other passages, it may seem tempting to think of sentence predicates, as in fact is commonly done in the commentaries and translations.<sup>22</sup> However, this rendering will easily distract us from the real issue here, which is not the (possible) syntactical function of the categorial designations. To Aristotle, what the discussion in arguments like the present one is all about is the semantic function of names used, irrespective of their actual occurrences in a statement, and no matter

<sup>21</sup> See my section 10.

<sup>22</sup> As was remarked upon before, when commenting on the opening lines of Z 1, Frede and Patzig too, who present a wealth of evidence for the thesis that the Aristotelian forms are particulars, not universals, seem to incur some minor problems owing to their (tacit) assumption that Aristotle's doctrine about the forms applying universally to kindred things is to be understood in terms of sentence predication. For this discussion see my section 9.63.



whether they are used in subject or predicate position. So at 1028a20-28, it is the significative force of non-substantial designations that is under discussion. It is asked, then, whether such appellations — when actually used (whatever their syntactical function) — are by themselves significative of ‘being’. As we have seen, the answer is in the negative, because whenever they are used ‘substantively’ (i.e. substantivated), it is the notion of their substratum (which is plainly implied in such a designation) that comprises its own and its accidents’ being-there.<sup>23</sup>

The semantic exposition can now be rendered as follows:

*Met. Z 1, 1028a20-31*: That is why one might indeed be puzzled as to walking and thriving and sitting down, whether they signify each of these things [i.e. walking etc.] as be-ings, and this similarly holds for any other thing of this sort. For none of them is either of a nature to ‘be’ in its own right, or is capable of being separated from the substance it inheres in.<sup>24</sup> If anything, it is the walking *thing* and the sitting *thing* and the thriving *thing* that *is*. Evidently, these are the things that *are*, more (μᾶλλον) <than these properties>, because there is some determinate thing that underlies them, viz. the particular possessing beingness (ἡ οὐσία καὶ τὸ καθ’ ἕκαστον), which precisely (ὅπερ) is that which comes about in designations of this sort (ἐν τῇ κατηγορίᾳ τῇ τοιαύτῃ); for there is no talk of \*‘the good’ or \*‘the seated’ without this [i.e. determinate thing] being included. Hence it is clear that it is on account of this ousia that each of those things [i.e. ‘walking’ etc.] *are* as well. And therefore what primarily *is* (τὸ πρῶτως ὄν) — not ‘is in a certain way’ (οὐ τὶ ὄν), but ‘is in an unqualified sense (ὄν ἀπλῶς) — will be the ousia.

Next this primacy is explained as holding in three respects: in designation, in knowledge, and in time. The first two clearly are to be understood in semantic terms:

*Ibid.*, 1028a31-b2: Now we speak of primacy in many ways; yet ousia is primary in every way: both in designation and in knowledge and in time as well. For of what is expressed by the other designations (τῶν ἄλλων κατηγορημάτων) nothing is separable but this alone. And,

<sup>23</sup> De Rijk (1980), 24-6. Owing to his misinterpretation of Aristotle’s semantic expositions in *Met. Δ 7* about the different senses of ‘being’ and those in *Z 1ff.* concerning οὐσία as both ‘substance’ and ‘essence’, and founding his interpretations of the Aristotelian texts upon modern distinctions concerning sentential predication, Bostock has gone so far as to advance (45-52 and 65-8) several alternative accounts of Aristotle’s doctrine of ‘predication’ (all unsatisfactory in his opinion), and eventually imputes all the deficiencies and obscurities he thereby encountered to Aristotle himself.

<sup>24</sup> For this use of the definite article see Verdenius (1981), 351, and Kühner-Gerth I, 593.

accordingly, in designation too this [i.e. the hypokeimenon] is primary, because in the designation of everything that of the ousia must be included. Besides, we then know a thing most fully when we are familiar with *what*, say, a man or fire is, more fully indeed than when we know its quality or quantity or place, because it is also true of each thing when designated according to one of these properties that we then know it in itself (αὐτῶν) when we know *what* that which is a quale or a magnitude is.

From the last sentence it appears that when we get acquainted with some thing through a designation of one of its coincidental modes of being, which purposely may be at the focus of our attention, it still holds that even our being familiar with this qualitative or quantitative being can only be fully accomplished if we know what the bearer of these properties is.

#### 9. 12 *Finding one's way among the common-sense opinions about οὐσία*

In the subsequent discussions of Z, Aristotle proceeds to test the credentials of the common-sense candidates for being the true ousia. Father Joseph Owens (1978, 318) has aptly itemized the characteristics required for the successful claimant of the title οὐσία as they can be gathered from Z 1, thus: (1) a 'what-it-is', (2) a 'this', (3) primacy in the sense that through it all other things are expressed as 'being', (4) self-subsistent (καθ' αὐτὸ πεφυκός; 1028a23), (5) separate, (6) underlying, and (7) definite or determinate (ὀρισμένον; 1028a27).

In chapter 2 Aristotle begins, as so often, with the common-sense viewpoint on the subject matter. The common acceptance of οὐσία takes the term to most appropriately refer to the bodies, such as animals and plants, including their parts, and also simple natural bodies like fire, water, earth and their products, including, for instance, also the heavenly bodies, sun, moon, and stars (1028b8-13). Far from rejecting the common view,<sup>25</sup> Aristotle asks the *de jure* question: Are we right in putting things this way? So several alternative opinions (Presocratics, Pythagoreans, Plato, Speusippus, Xenocrates) are opposed to the common view (1028b13-27).

<sup>25</sup> Bostock (69) has well observed that the list of οὐσίαι presented here is almost exactly the same as the one given as Aristotle's own list at *Cael.* III 1, 298a29-32 (though in *Cael.* without suggesting, as in *Met.* Z 2, that the heavenly bodies are made of the four sublunar elements, instead of a fifth element, the purest type of body, the αἰθήρ). Cf. *PA* II 1, 646a12-b12, where Aristotle presents, as a preface to his explanation of the parts of animals, the main items of the common list, in more detail.

The chapter ends (1028b27-32) with the proposal to investigate what is tenable in all these conflicting views.<sup>26</sup> However, this investigation is less systematic than one could expect. The criteria one can gather from the introductory chapter (Z 1) are not as such made explicit at the outset, in order to test the validity of the claims of the respective candidates. Anyway, in the course of the subsequent investigation, two requirements among the seven characteristics mentioned in Z 1 turn out to be decisive. The successful candidate must be at the same time (a) the ultimate subject-substrate of all appellations assignable to the 'thing' in question<sup>27</sup>, and (b) a particular that *is* in virtue of itself and separately.<sup>28</sup> Thus the two 'things' that were prevailing in the discussion in Z 1 are throughout the books Z and H still at the focus of Aristotle's interest. In this perspective, the most likely claimants to arise from the (amended) common-sense list, (1) matter, (2) the particular physical object as a whole, (3) the universal, and (4) essence, will come up for discussion in the next chapters.

## 9. 2 *Is the substratum (τὸ ὑποκείμενον) the οὐσία?*

Once the various earlier and contemporaneous views about the genuine nature of οὐσία have been listed and given some attention, from chapter 3 onwards the investigation becomes a bit more systematic. The appellation οὐσία can be applied, Aristotle asserts, in a fourfold way to what presents itself as 'being'. On the basis of the above-mentioned views, a first *prima facie* classification is made (1028b33-36):<sup>29</sup>

(a) the 'what it [i.e. the 'thing' under consideration] *is*' (τὸ τί ἐστὶν or τὸ τὶ ᾗν εἶναι);<sup>30</sup>

<sup>26</sup> Aristotle's general attitude towards other people's views (particularly poets' and his predecessors') is given appropriate attention in Mansfeld (1994), 155, where it is aptly assessed (155-61) in the framework of what is called 'creative exegesis'.

<sup>27</sup> *Met.* Δ 8, 1017b13-14; Z 3, 1029a8-9; 13, 1038b15.

<sup>28</sup> *Met.* Z 3, 1029a27-28; Λ 5, 1070b36-1071a1. The 'separateness' meant here is 'self-containedness'.

<sup>29</sup> Guthrie VI, 209.

<sup>30</sup> It is commonly assumed that the past tense of 'be' in τὸ τὶ ᾗν εἶναι and τὰ τὶ ᾗν εἶναι has no significance. Grammatically speaking, however, there is a difference. As in Latin the 'quid est?' question is eventually answered by presenting what is thought to be the thing's 'quidditas' or 'what-ness', likewise the τὸ τὶ ᾗν εἶναι phrase corresponds to the τί ἐστὶ question, meaning 'this is what *was* initially asked'. On this surmise, you can easily explain that in fact from *Top.* (I 4, 101b19-

- (b) the universal (τὸ καθόλου);
- (c) the genus (τὸ γένος);
- (d) that which underlies, or the substratum (τὸ ὑποκείμενον).

Bostock (74) may be right in thinking that the programme with which chapter 3 begins is not quite what we would expect. In fact, Aristotle still seems to take the start — from the common-sense views about οὐσία — seriously enough to refrain from making a fresh, more speculative beginning. However, Bostock's appraisal of the situation as problematic is not well-founded. He takes exception to the fact that chapter 2 has prepared us for a discussion of the question What things are substances? (cf. 1028b27-32), whereas here the question at issue appears to be: What is the substance of a thing? These questions, however, can only be regarded as distinct if one ignores (with Bostock) the ambivalent meaning of οὐσία (both 'subsistent entity' and 'quiddity'). What Aristotle's enquiry throughout the central books of the *Metaphysics* is all about is *what* precisely provides an outside thing with 'being-ness'.

On this assumption, both his *prima facie* classification (1028b33-36) and the polished one, which at 1038b2ff. in retrospect turns out to have been the pattern for the more systematic discussion in chapters 3ff., are easy to explain. As far as the *prima facie* classification is concerned, from the contemporaneous (Ancient) point of view the τί ἐστι question quite naturally puts itself forward as the leading one, especially in the perspective of Platonic ontology; and in the Platonic

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23) onwards, the τὸ τί ἦν εἶναι phrase is interchangeably used with 'definien', which is the outcome of the analysis of a thing called forth by the τί ἐστι question. On this assumption, the grammatical difference signals a procedural peculiarity. For this use of the imperfect tense where there is a reference to a past thought see e.g. *Met.* M 2, 1077b15; Plato, *Crat.* 387C10 (εἵπερ καὶ τὸ λέγειν πρῶξίς τις ἦν = since speaking *is, as we have seen*, a sort of action). Liddell & Scott s.v. εἶμι, section F. A nice example in Aristotle is *Met.* Λ 6, 1071b3: "Since, as we said [viz. at I, 1069a30], there are three kinds of ousia" ('Ἐπεὶ δ' ἦσαν τρεῖς οὐσίαι). Cf. Cicero, *De officiis* I 40, 143: "Itaque quae erant prudentiae propria, suo loco dicta sunt". — It is found in modern languages, too; for instance, in 'Yes, this *was* my intention', meaning 'Yes, this *is* the intention I spoke of'; or 'Who was your master, again?'; cf. the colloquial use in Aristophanes, *Acharnenses*, 157: τοῦτ'ι τί ἦν; = 'What *is* this, *again*?' Cf. Kühner-Schwyzler II 2, 279f.; Bassenge (1960), 32; Frede & Patzig II, 35. On this interpretation of the imperfect, one could render τὸ τί ἐστι 'the what <it> is', and τὸ τί ἦν εἶναι 'the what-ness' or quiddity we were looking for' (cf. Bassenge, 40; 205-13). Arpe (17, n. 20) calls this "elliptical *attractio temporis*" (Bassenge 32) "Imperfektum der gedanklichen Voraussetzung". This much is certain: the name 'imperfektum philosophicum' is a misnomer, coined on the erroneous assumption that this imperfect ('Dauerimperfekt' oder 'Imperfekt der Unveränderlichkeit') standing (it is supposed) for 'what is of old and now and always', is used for expressing eternal, philosophic truths.

line of thought, the items ‘universal’ and ‘genus’ are, as a matter of course, included. The substratum, on the other hand, is the backbone of Aristotle’s own approach to the issue of ontology, which basically boils down to his continuous attempt to bring the metaphysical investigation back to earth. It is mainly this last concern that leads Aristotle to start off his programme with the substratum as a claimant, with in its wake the concrete particular.<sup>31</sup> It is only by continuously sticking to the firm domain of particular beings that Aristotle’s pushing forward to ‘universal’ and ‘essence’, which from the angle of epistemonik proof (ἀπόδειξις) is a must, does not run the risk of positioning a thing’s essence outside itself in some transcendent realm.

Evidently, this classification is still too haphazard and contains too many overlaps to serve as a well-profiled guide for further investigation, not only because of the apparent ambiguity of the label ὑποκείμενον, but also since the terms τὸ τὶ ἦν εἶναι and μορφή<sup>32</sup> seem to refer to the same,<sup>33</sup> and genus is only an instance of τὸ καθόλου (‘the universal’). Aristotle’s strategy of argument, as it is actually developed in the remainder of Book Z (and H), is further obscured by the composition of Z as it has been handed down to us. Roughly speaking, chapters 4-6 and 10-11 deal with the notion τί ἐστὶ (‘what-(it)-is’), while the universal including the genus will be discussed in chapters 13-16. Chapters 7-9 contain a digression on the notion of ‘coming to be’, which is closely related to what is under examination in chapters 4-6; the concluding chapter 17, which will deal with the credentials of οὐσία taken as a thing’s εἶδος (‘primary form’), clearly takes a fresh start in the search for the true ousia, and is more aptly reckoned among the cluster H 1-6. It should be noted in this connection that Aristotle’s summaries at the end of Z 11 and at the beginning of H 1 do not mention chapters Z, 7-9 and 12.<sup>34</sup>

<sup>31</sup> *Mel.* Z 3, 1029a1-3: “We must first determine the nature of this [i.e. the hypokeimenon]; for that which primarily underlies a thing most truly seems to be ousia”. Note that the basic notion of hyparxis is the main constituent of the notion ‘hypokeimenon’.

<sup>32</sup> The use here of the word μορφή, which is frequently found in Aristotle as an equivalent of εἶδος and τὸ τὶ ἦν εἶναι, may be influenced by the author’s explanation (in the footnote-like passage 1029a2-7) of what he has in mind (when speaking of ‘form’, ‘matter’ and their ‘compound’) by the ‘form-matter’ relationship between the components ‘form’ and ‘matter’ in artefacts, in which shapes (μορφαί) are at issue, not essential forms (εἶδη). One should not render μορφή (at a2, a4 and a31) ‘shape’ (Bostock).

<sup>33</sup> As will soon appear (Z 6, 1031b1-2).

<sup>34</sup> Bostock 71; 119; 176f.

After giving a rough classification of possible candidates for being the true ousia, Aristotle (1028b36ff.) goes on to sketch the position of one of them, the ὑποκείμενον ('underlying thing'). First, the ambivalent notion of 'underlying thing' is analysed into three possible senses: matter (ύλη), form (μορφή), and the particular composed of matter and form (τὸ ἐκ τούτων). All three act as the underlying element and bearer of a thing's further determinations: matter indeed qua underlying the substantial form or 'infima species' (εἶδος);<sup>35</sup> the form as the bearer of additional forms, i.e. all attributes not included in the definiens of the species;<sup>36</sup> finally, the composite 'this' in virtue of its being substantially composed of matter and form.

#### 9. 21 *Can the form be called an 'underlying thing'?*

There has been much discussion about Aristotle asserting that a thing's form can be called an 'underlying thing'.<sup>37</sup> Bostock (75) thinks it is mysterious that "Aristotle should *also* (his italics) characterize form as a subject (an 'underlying thing') rather than a predicate, as he does both here and at H 1, 1042a26-31". I am afraid the whole mystery is based upon Bostock's confounding logic and ontology, in particular, logical predicate and ontological attribute or property, and his rejection of Frede's correct observation<sup>38</sup> that Aristotle knows of particular forms. In point of fact, ontologically, to Aristotle the only forms there are at all are the dynamic particular forms immanent in the concrete particulars. That, say, the form 'man', which inheres in Socrates, is predicable of Socrates logically, i.e. when taken as a concept — and predicable of other people as well — should not lead us astray so as to put on a par the logical item 'predicate' annex 'subject' and the ontological one 'property' annex 'substratum'.<sup>39</sup> Of all people it is Aristotle who charges (*Met. Z*, 15)

<sup>35</sup> The label 'infima species' is here used not primarily as a logical tool, but to indicate the particularized form which is signified by this 'lowest' universal ('common noun'). When (correctly) rejecting the idea of 'universal' forms being immanent in outside things, Heinaman (1979) seems to be overreacting by disallowing the label 'infima species' when used ontologically to stand for particular immanent forms. Even the primarily logical term λόγος is sometimes used by Aristotle to refer to an immanent εἶδος.

<sup>36</sup> Ross I, 164f., who rightly refers to *Met. Δ* 18, 1022a32, where the soul is described as the ὑποκείμενον of life.

<sup>37</sup> Details in Frede & Patzig II, 39, and Bostock, 75f.

<sup>38</sup> Frede (1978); Frede & Patzig, *passim*. See my section 9.63.

<sup>39</sup> Elsewhere (79) Bostock confuses the distinction between logic and ontology by introducing a further kind of 'is', called the 'is' of 'constitution', opposed to the

Plato with having committed this mistake by upgrading logical ‘predicates’ (actually ‘names’ or ‘appellations’)<sup>40</sup> to metaphysical entities. In Guthrie’s evocative language (VI, 211):

“[...] it was as the apostle of common sense that Aristotle left the philosophical camp of his master. Plato had not played fair by the rich variety of things in the natural world. Professing to explain them, he had in fact robbed them of most of their reality and transferred it to some super-reality of his own invention. Men became mere shadows of the autoanthropos (Aristotle’s word, e.g. 1040b33), who existed apart on some higher plane. To Aristotle he was a figment of the imagination, and his invention only served to degrade the realities around us”.<sup>41</sup>

That the form (εἶδος) can be taken by Aristotle as “underlying thing” quite naturally follows from his view (which will be extensively expounded in Z 4) that any particular form, whether substantial or not-substantial, can only exist as enmattered in a ὑποκείμενον, and that for this very reason the notion εἶδος (‘form’) ‘coincides with’, i.e. necessarily refers to,<sup>42</sup> the compound whole (τὸ σύνολον). From this angle, there is no need to be surprised about all those passages in which matter is in passing asserted to be ousia, i.e. something entitled to the name (appellation) οὐσία.<sup>43</sup>

### 9. 22 *Matter’s credentials put to the test*

After a parenthetical remark on what he understands by the notions ‘matter’, ‘form’ and ‘compound’, Aristotle (1029a7-10) emphasizes that to explain the nature of ousia in terms of its being a hypokeimenon — i.e. “that of which every other appellation is used, while it itself is not an appellation of something else” (1028b36-37; cf. 1029a8-9) — is not enough to truly identify ousia, for by itself this is an unclear notion; and further, so he says, on this view, *matter* becomes the ousia. In the next few lines, the force of matter’s claim

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‘is’ of predication.

<sup>40</sup> For the role of naming (not ‘predicating’) in Plato see De Rijk (1986), 72-6; 84-90; 94f.; 107-9; 161-3; 316-26; 341-7; and for Aristotle my sections 2.11-2.16; 4.1-4.2.

<sup>41</sup> Elsewhere (VI, 103) Guthrie speaks of Aristotle’s ‘inviolable commonsense postulate’, and ‘the primacy of the particular’.

<sup>42</sup> In other words, the coincidence is referential identity.

<sup>43</sup> *Met.* Z 10, 1035a2; H 1, 1042a24-b8; H 2, 1042b9-10 and 1043a14-19 and 26-8; H 4, 1044b5; A 3, 1070a9-13; *An.* II 1, 412a6-9.

for being the true οὐσία (1029a10-27),<sup>44</sup> as well as the impossibility of honouring it (1029a27-30), will be discussed.

The main argument in support of matter's claim is that once the elements in the nature of a sensible thing have been stripped off — like its affections, doings, and powers,<sup>45</sup> or even its so-called 'secondary qualities', viz. the quantitative entities, length, breadth, and depth, — evidently nothing but matter remains, since it is that primary thing to which those 'things' belong and which is determined by them.<sup>46</sup> From this point of view it follows that matter does have strong testimonials and even seems to meet the conditions for being a thing's ousia *par excellence* (1029a11-19). Another footnote on what is meant by 'matter' has been added (a20-26), which serves to explain what has just been observed with reference to matter being determined by quantitative entities:

*Met. Z 3, 1029a16-26:* For when we take away length and breadth and depth, we can see nothing remaining, unless it be the something determined by them (τὸ ὁριζόμενον ὑπὸ τούτων), so that on this view matter must appear to be the only ousia. By 'matter' I mean what, taken by itself, is said to be neither a <definite> thing, or a magnitude, or anything else designated by one of the other appellations by which that which *is* is determined. There is indeed something of which each of these <categorical> appellations are said, whose being is different from that conveyed by each of the categories: for all the others [i.e. the non-substantial categories] are said of the ousia, and the latter of the matter in question.<sup>47</sup> Hence a thing's ultimate <material> element is not in its own right a <determinate> thing nor a magnitude nor any other <determinate> thing; nor, of course (δὴ) the negations of these, for these fall to them only coincidentally.

The purport of the argument is that each and every appellation by which we may designate a particular entity in the outside world, including the substantial appellation ('this F', say 'this man', 'this tree'), is bound to contain a determination which as such is beyond the basic notion of 'being (there)', and, consequently, is dispensable and disposable when it comes to founding a thing's being there.

<sup>44</sup> This passage is extensively commented upon by Frede & Patzig II, 42-5.

<sup>45</sup> Of course, the powers of something particular are intended, not such a thing as the potentiality of matter itself.

<sup>46</sup> Cf. *Phys.* IV 2, 209b6-11: "When the limit and the attributes of a sphere have been taken away, nothing is left but its matter".

<sup>47</sup> Note the use of the definite article, which makes it clear that there is talk of a certain thing's (ultimate) material element, not just 'matter'. Of this passage too, any interpretation in terms of sentential predication leads to difficulties. See Frede & Patzig II, 48 and 51.



Matter alone is not. One might suggest, Aristotle continues, that, given that these appellations should be stripped off, perhaps their negations ('a not-this', 'a not-magnitude', and the like) will do. Such appellations, however, merely determine a thing coincidentally, for to designate e.g. a man with the negated appellation 'not-tree' is coincidental, because, when doing so, any other negated appellation can be substituted for 'not-tree', so that the use of any of them is a mere coincidence.<sup>48</sup>

### 9.23 *Can 'substance' be 'predicated' of matter?*

Throughout the last few decades, Aristotle's words have evoked an immense literature on the vexed question<sup>49</sup> "Can Substance be Predicated of Matter?" which, as most of the interpreters take it, seems to be answered by Aristotle in the affirmative. We find here, I am afraid, one of the most remarkable instances of people being misled by their confusion of semantics with syntax: they mistake the verbs λέγεσθαι and κατηγορεῖσθαι = 'to be said of' for 'being (apophantically) predicated of'; or, in other words, they confuse appellation and predication, and the onomastic and apophantic levels.<sup>50</sup> In point of fact, Aristotle does not at all claim or imply that he allows for a statement like 'Matter is Substance', meaning (taken intensionally) that matter is essentially or accidentally substance, or (extensionally) that matter belongs to the class of substances. In order to point out the position of 'matter' — which is taken here as an equivalent of hypokeimenon, with which it shares the property of being 'that of which other things are said of, while it is itself said of nothing else'<sup>51</sup> — what he is really claiming is that hypokeimenon and its equivalent, matter, are that which a thing is when it is deprived of any of its determinations, whether essential or coincidental, so that they can be used *to call up* the outside things even if any of their determinations are thought to have been stripped off, indicating, for instance, Socrates, or this beautiful tree, just 'it', or ['x'], period.<sup>52</sup>

<sup>48</sup> The lines 1029a20-36 are interpreted by Bostock (78-80), as usual, in terms of sentence predication, instead of naming ('naming'). This forces him to assume a special case of 'is' to be involved, the 'is' of constitution.

<sup>49</sup> See Bäck (2000), 87-97, including the literature mentioned there.

<sup>50</sup> My sections 4.1-4.2; 4.32.

<sup>51</sup> See 1028b36-37 *juncto* 1029a8-9 and a21-24.

<sup>52</sup> Here one meets with a similar misunderstanding to that found in the learned question whether there is in Plato 'self-predication' of Forms, as though, by his claiming that the transcendent Form, Beautiful, is primarily entitled to bear

Using modern phraseology, we could say that when evaluating the good chances of the hypokeimenon, Aristotle reduces the latter notion to indicating a thing whatsoever as just an entirely undetermined ['x'], or its mere 'being there', and nothing else. Any determination is lacking then, even a negative one like 'not-stone', because of its equivalence to a metathetic affirmation 'being something different from stone'. What after the rigorous conceptual dismantling of a thing still remains is something extremely important, viz. its really being given in the outside world.

Any student of Plato's *Timaeus* will be reminded of what Plato says about the Receptacle. To refrain from adulterating the receptacle's peculiar nature, viz. its being entirely formless (51A8), Plato makes use of what I have called (1986, 269) 'merely deictic references', such as are conveyed by syncategorematic expressions, like 'this' or 'that', which do not affect the Receptacle's absolute lack of any definite *mode* of being, and convey nothing more than indexicals like 'here' and 'now' do.

This much seems to be certain: any puzzling<sup>53</sup> about the question whether this matter is 'ultimate matter' or 'prime matter' in the senses in which these labels might be used in the context of the *Physics* is beside the point. The present ὕλη or ὑποκείμενον is 'ultimate' only in terms of semantic analysis, as it is the appellation that suits a thing in its bare 'being there'. And that is precisely why our focusing on a thing's bare subsistence could *possibly* result in grasping it in its most true being, which it surely has in common with

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the name 'beautiful', Plato admits of such oddities as 'The Beautifulness is beautiful'. The only thing Plato means to say is that the name 'the beautiful' <entity> has its highest titular ('prime referent') in the domain of Forms, while outside things may be entitled to bear this name only because of their partaking in the transcendent Form, Beautifulness. See De Rijk (1986), 55-63; 214-53; 316-26. For this odd issue (and the peculiar role G. Vlastos played in the discussions) see Guthrie IV, 119f.; 223; 360; 551ff.; V, 42-50, esp. 42, n. 1; VI, 119ff. Guthrie was, I take it, unduly impressed by the 'problem', but none the less ironically remarked (V, 42) about this 'battlefield for commentators': "Every possible view has been both asserted and denied by scholars modifying not only the views of others but also their own". A nice sample of it is found in Guthrie VI, 223, n.3 (on Vlastos's 'Pauline predication').

<sup>53</sup> Bostock (73; cf. 250f.), who adheres to the prime matter thesis, offers (73) a short report about this puzzling, including the protagonists, King, Charlton, Jones, answered respectively by Solmsen, Robinson, and Code, who all defended the prime matter thesis; at a second stage, the controversy went between Stahl, Furth, and Gill, who were countered by the orthodox Williams, Cohen and Graham. Bemelmans (1995) has convincingly shown how to deal with this pseudo-problem by using my categorization thesis; see also my sections 12.37-12.39.

all things and everything. Thus matter could easily make an excellent candidate for being true ousia.

### 9.24 *Matter's credentials nullified*

At first glance, then, the hypokeimenon *is* an outstanding candidate for being the true ousia Aristotle is looking for in the *Metaphysics*. Unfortunately, the very idiosyncrasy of matter is fatal to its application. Matter is not capable of separate, independent existence nor is it a definite *this*. Thus it fails in the two features that mark true ousia, its independence and its this-ness. (1029a27-28).

Given the inadequacy of matter, the two other candidates will be in a better position to carry off the palm; for the form (called this time by its favourite name, τὸ εἶδος) and the compound would seem to be more ousia than matter is. As for the chances of the former applicant, one has to be aware that one of the two main features of ousia is 'being-ness', and the compound here is auspiciously named τὸ ἐξ ἀμφοῖν οὐσία. None the less, Aristotle removes the compound without hesitation, for, he says, "it is posterior and too obvious" (1029a29-32).<sup>54</sup> What remains to be done is to investigate the credentials of the other claimant — the form. "The most perplexing indeed", Aristotle adds, presumably because of its Platonic flavour.

Regarding our search for the τὸ τὶ ἦν εἶναι, Aristotle wants to make absolutely sure that he will not catch us poaching on Plato's territory. Small wonder then that he<sup>55</sup> takes his starting-point from sensible ousia. His expression of this aim is accompanied by an elaboration of the idea alluded to earlier (1029a32) that, though the primary ontic conditions or first principles of things are not what is immediately familiar to us, all learning has to proceed by induction from that which is familiar to us to that which is intelligible in itself.<sup>56</sup> Thus Aristotle can easily propose to proceed now by means of what is by

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<sup>54</sup> No doubt Aristotle's standard lore is here alluded to, viz. that what is more familiar to us is not a principle by nature.

<sup>55</sup> Or the redactor of *Met.* For the position of this passage and Jaeger's suggestions see Ross II, 166.

<sup>56</sup> Cf. *Phys.* I 1, 184a14-18: "Plainly (in all branches of study), our primary task will be to try to determine what element relates to its principles. The natural way of doing this is to start from the things that are more familiar and obvious to us and proceed towards those which are clearer and more knowable by nature; for the same things are not knowable relatively to us and knowable in an unqualified sense"; cf. *EN* II 5, 1106a 28 and 6, 1107a1.

nature less intelligible towards what is more intelligible, however little genuine 'being-ness' that which is first familiar to us embodies.

### 9. 3 Οὐσία *taken as essence or quiddity* (Z, chs. 4-6)

Chapter 4 opens by recalling the earlier distinction of the various characteristics by which we determine subsistent entities, one of which was thought to be τὸ τὶ ἦν εἶναι ('what-it-is-to-be' or 'quiddity'). Now that the claims of its competitors have been enervated, we have to investigate its own credentials.

#### 9. 31 *The role of the καθ' αὐτό appellation*

Aristotle proposes to begin with certain semantic observations on account of the notion 'essence'. In the present analysis the formulas τὸ σοὶ εἶναι, τὸ ἀνθρώπῳ εἶναι, τὸ μουσικῶ εἶναι are key phrases. They seem to be of Aristotle's own invention. It may be asked what precisely is indicated by the use of the dative case. It is commonly taken as a possessive dative (and rightly so), meaning the 'what-it-is-for-a-thing-to-be'. But sometimes, at least, there seems to be an additional connotation of what grammarians indicate as *dativus causae*, as to make e.g. τὸ μουσικῶ εἶναι stand for the being-ness caused by the form 'educated'. The latter interpretation finds some support in Aristotle's view of the empty notion of connotative 'be' determined by a substantial or non-substantial form, and in the 'forma dat esse' device of *An.* II 4, 415b8-28 as well.

On this alternative (additional) exegesis, τὸ μουσικῶ εἶναι could be nicely taken to be something like the kind of being conveyed by the form 'educated'. But to interpret τὸ σοὶ εἶναι along the same lines would be awkward. On the other hand, Bostock's rendering of 1029b14-15 "being for you is not the same as being for an educated thing" is not satisfactory either, because it does not show that *your* being brought up by the appellation 'the educated thing' is at issue, and not merely the abstractly opposing of two random forms, 'being-you' and 'being-educated'. Therefore one might reasonably assume that the use of the dative is open to either interpretation. Anyway, the renderings 'to be a man', 'to be educated' will always do.<sup>57</sup>

<sup>57</sup> Therefore in the context of the (anachronistic) distinction between sorts of dative cases, we should speak of an ambivalent use, covering both the use of cause

The opening few lines of the chapter leave no doubt that the present discussion is all about naming of the outside things, and the skill to distinguish between a thing's privileged appellations that hit the mark by precisely grasping it in its substantial being (καθ' αὐτό), and those which only call it up by using names referring to one of its coincidental features (κατὰ συμβεβηκός):

*Met. Z 4, 1029b13-15:* And first let us make some semantic<sup>58</sup> remarks. The quiddity of each thing<sup>59</sup> is what the thing is named by in its own right. For <your> being-you is not your being-an-educated-thing, since you are not by your very nature educated.<sup>60</sup>

What Aristotle seems to have in mind here is the use of an expression ('name', 'appellation', often called κατηγορία or προσηγορία) that is thought to stand for the very quiddity of an outside entity, because the entity under consideration in virtue of itself (καθ' αὐτό) possesses the attribute signified by this expression. This expression may feature — in the surface structure — as the predicate expression of a copula construction concerning this entity, as it does for instance in 'Socrates (this man) is a rational animal'; or another predicative determination, like in 'I call Socrates (this man) a rational animal'; or it can merely serve as a tool to bring up this entity in a quidditative way, as in 'this rational animal'. For this reason, to exclusively interpret Aristotle's words and examples in terms of statements of the copula construction type, as is commonly done by the interpreters, obscures the purport of these expressions and often causes unnecessary problems and drawbacks.<sup>61</sup>

A similar observation applies to Aristotle's use of 'definition'. When he claims in the opening few lines of this chapter (1029b1-3)<sup>62</sup>

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and property. To speak of an ambiguous use of this dative is only due to the grammarian's (pedantically) splitting up the senses of the ambivalent focal meaning.

<sup>58</sup> For this sense of λογικῶς see Ross, Frede & Patzig, and Bostock (*ad loc.*).

<sup>59</sup> My rendering follows Greek idiom, which often has a dominant use of the word ἕκαστος; my *Index s.v.*

<sup>60</sup> Most MSS add the words ὃ ἄρα κατὰ σαυτόν, meaning 'that apparently is the sense of the phrase κατὰ σαυτόν'. I think that the codex Laurentianus is right in omitting these words, which really sound like a marginal gloss slipped into the text.

<sup>61</sup> The crucial difference between predication and naming ('appellation') has been discussed in my sections 2.11-2.16 and 4.2. There are strong reasons for assuming Aristotle to point out a monadic deep structure anatomy of the basic statement-making utterance, according to which a copula-less assertion, rather than the later 'S is P' construal, is at the focus of Aristotle's attention. My sections 1.51; 2.12-2.16.

<sup>62</sup> For Jaeger's commonly adopted view on the position of these lines see Ross II, 166.

that the search for the true ousia should be made by proceeding along the lines of the καθ' αὐτό distinction of 'what is', which is to bring categorial being into the focus of interest, Aristotle indicates the manner of searching the οὐσία as 'to define (describe)' it. Again, this defining or describing should not be taken as the framing of definitions (descriptions) of the statemental type ('x is F'), but rather in terms of using a set of quidditative attributes, so that the appellations in question are to be taken as definientia (not definitions), which, admittedly, may, but need not exclusively, be used in copula constructions.

Returning now to Aristotle's recommendation (at 1029b13-16) to frame a καθ' αὐτό formula in order to arrive at a thing's quiddity, the author deems it worthwhile to preclude the possible misunderstanding that *the whole* of what a thing is in its own right is its quiddity. He clarifies what he means to say by somehow qualifying the criterion καθ' αὐτό ('in virtue of itself', 'by its own right'). A distinction should be made between the notions 'primarily falling to some thing' and 'belonging to a thing's quiddity'. This is made clear by analysing the ontic relationship between 'surface' and the attribute 'whiteness'.<sup>63</sup> Aristotle claims that to be coloured primarily falls to surfaces (and so in their own right in a way), and that this feature should, therefore, occur in the definiens of any surface. But this sense of 'being in its own right' should be discarded here; for, properly speaking, it is not in its own right qua being white, but qua being coloured that the surface may be called white in virtue of itself:

*Ibid.*, 1029b16-18: But not the whole of this is a thing's quiddity. For the 'in virtue of itself' manner in which white falls to surface will not do, because being a surface does not imply being white.<sup>64</sup>

There is still another exception to the rule that a thing's quiddity is that by which it is named in its own right, viz. if one intends to quidditatively designate a white thing by calling it 'white surface'. Such expressions will not help us find a thing's quiddity either, because of the occurrence of the definiendum in the definiens. To obtain a thing's quiddity, one should correctly focalize and categorize

<sup>63</sup> The passage is extensively commented upon by Burnyeat (1979), 18-21, and Frede & Patzig II, 59-61.

<sup>64</sup> So the third of the five senses of καθ' αὐτό distinguished in *Met.* Δ 18, 1022a29-32 is ruled out: "Whatever attribute a thing receives itself immediately or in one of its parts; e.g. a surface is white in virtue of itself, and a man is alive in virtue of himself; for the soul, in which life immediately resides, is a man's part". The same problem is discussed in *APo.* II, 5-6.

the thing under examination, by using an appellation that precisely expresses its 'what-it-is-to-be'. Hence a definiens is required in which the term by which the thing is initially brought up does not itself feature; it should only express the meaning of the initial term more explicitly:<sup>65</sup>

*Ibid.* 4, 1029b18-20: Nor again does the combination of both <elements, viz. the thing and its καθ' αὐτό attribute> present a thing's [e.g. surface] quiddity, <saying that it runs> 'being a white surface', because 'surface' itself is added. Hence the definiens in which the thing itself is expressed without it [i.e. the thing's name] being itself contained in it [definiens], *this* is the formula of each<sup>66</sup> thing's quiddity.

Next follows (b21-22) a remark on account of Democritus's theory of colour. If one follows Democritus in defining an object's colour as an impression conveyed to our eyes from its superficial texture,<sup>67</sup> the procedure of defining surface, then, as 'being a smooth surface' will only boil down to equating 'white' and 'smooth', so that the two aforesaid censures can still be made, viz. that the wrong sense of καθ' αὐτό is involved (smoothness properly falling to colour, not to whiteness), and that the definiendum is adopted in the definiens.

So far compounds concerning subsistent entities that are designated by means of a substantive noun (or a pronoun like 'you') have been under discussion. A successful grasp of their quiddity can be jeopardized, as we have seen, if the substantive is accompanied by an adjectival attribute like 'educated' or 'white', so as to suggest that the actual attributes of the thing under consideration are part of its quiddity.

### 9.32 *On using the ἰμάτιον device*

In the next few lines Aristotle goes on to pay attention to another type of compound, viz. those from the categories other than 'substance'. In these cases too there is always talk of compounds (called

<sup>65</sup> For a number of alternative interpretations of this baffling passage see the discussions *ad loc.* in Frede & Patzig and Bostock.

<sup>66</sup> Of course, Aristotle does not say that the quiddity thus tracked down is common to each and everything, but that for each thing it holds good that the formula found by this procedure is its quiddity. For this dominant use of ἕκαστος in Greek see my *Index s.v.*

<sup>67</sup> Aristotle, *Sens.* 4, 442b11-12; cf. *GCI* 2, 316a1; Theophrastus, *De sensu*, capp. 73-75.

this time σύνθετα), because the things named after one of the non-substantial categories are always composed of the feature denoted by this categorial appellation and the underlying thing it inheres in. This case is usually instanced by the compound 'pale man'. The difference between a compound of this kind and the cases discussed in the previous paragraph ('your-being-educated') is that Aristotle now focusses on compound things named after a form from a non-substantial category (quantity, quality) that is given subsistence ('substantiated') owing to its inherence in an underlying thing.

The sample used is, at first glance, a bit problematic in that it is grammatically expressed by the phrase 'pale man' instead of the substantivated adjectival expression τὸ λευκόν ('\*the pale). The reason is, I think, that Aristotle wants to speak of a pale human being, not just a white thing.<sup>68</sup> However, if the expression 'pale man' is used, the reader is put on the wrong track, so that Aristotle is forced to employ a semantic artifice.<sup>69</sup> Thus he substitutes the two-word expression 'pale man' by the one-word expression ἱμάτιον, in order to obtain one single notion, '\*paleman', in the sense of, say, something like 'paleface' or 'milksop', notions in which the paleness is not just a coincidental attribute, but, as it were, an essential, or, at least, quite distinctive one, as e.g. in 'I don't like this paleface' (speaking, say, of Alcibiades), which semantically differs from 'I don't like

<sup>68</sup> Like English (but unlike German and Dutch), Greek does not allow the masculine and feminine forms ὁ λευκός, ἡ λευκή, loosely used as substantivated expressions, to stand for the pale man and woman, respectively. (They may be used, of course, to contextually refer back to a masculine or feminine noun previously used).

<sup>69</sup> The artifice consisting in assigning a new meaning to a word already in use — which is in keeping with Aristotle's view of words signifying by convention (*Int.* 1, 16a19) — is applied several other times (*Int.* 8, 18a19 and *Mel.* H 6, 1045a26, each time by using ἱμάτιον as the magic word; in *PA*, this procedure is applied twice, once by attaching a single name to hot water and hot iron (II 2, 649a16), once by calling up the composite notion, 'boiling water' by a single term (3, 649b22), each time without instancing such a term; for the context see my section 12.3). — Like εἶμα, of which it is the diminutive, ἱμάτιον is mostly used for 'over-garment'. So it can be used to stand for a cover or camouflage disguising one's identity ('cloak'). In his book on barbarian customs, the grammarian Athenaeus (II<sup>d</sup>-III<sup>d</sup> cent. A.D.) cites (*Epitome* I, p. 23 D ed. Schweighäuser, Strassburg 1800) Aristotle's report that the Tyrrhenians (Etruscans) used to take their principal meal lying at the table together with the wives "cloaked by [lit. 'dressed up or disguised under'] the same [i.e. female] garment" (ἀνακείμενοι ὑπὸ τῷ αὐτῷ ἱματίῳ), with the result, indeed, that the convivers all passed for women, and could attend a dinner party which was only accessible to women. See *Fragmenta VIII Historica*, L. *Nomima*, 565, in *Aristotelis Opera* V, p. 1571 ed. Bekker (Berlin 1870). Plainly, the word ἱμάτιον is most appropriately employed for applying this semantic move.



Alcibiades' or 'this man'. At this point the question what precisely the quiddity of \*paleman is starts to make sense:

*Ibid.* 4, 1029b22-28: Now there are compounds indicated after the other categories, for there is a substratum for each of these compounds, e.g. those indicated by means of a qualitative appellation,<sup>70</sup> or a quantitative, or temporal, or local, or an appellation concerning its action or undergoing.<sup>71</sup> We must see, therefore, whether there is a formula of the quiddity of each of them, that is, whether to these compounds, too there belongs a quiddity; take for instance 'pale man'. Let, now, 'cloak' be the name for this compound. What, then, is 'being-a-cloak'?

Bostock (88), who complains that this section is in many ways obscure, fails to see the advantage of having a single word for 'pale man' and needlessly asks why the question 'What is the essence of a pale man?' could not have been raised directly. Thus he has completely missed the point, namely the substitution of a two-word expression consisting of a substantive and an incidental attribute by a one-word expression, in order to examine whether in analysing the one-word expression, the notion of the attribute necessarily comes out.<sup>72</sup> This, then, turns out not to be the case, so that in fact this artifice shows the two-word expressions of the 'pale man' type to be indefinable, unlike those containing an attribute that is constitutive of a thing's essence, as in 'two-footed animal', which is a quidditative definiens of 'man'.

Aristotle (b28-29) has to acknowledge, then, that despite this semantic move the coincidental compound 'pale-man' is still not named in its own right. The unity designated by the newly chosen one-word appellation ἰμάτιον is still not a quidditative unity.<sup>73</sup> In the next few lines (1029b29-1030a3) the shortcoming will be explained by distinguishing two ways in which an expression may fail to grasp a

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<sup>70</sup> The common rendering (Ross, Kirwan among others) of τὸ ποιόν, τὸ ποσόν etc. 'quality', 'quantity' etc. is somewhat misleading. These words should be taken to refer to that which is affected by these properties, rather than the properties themselves. See De Rijk (1980), 27-9; also my section 1.71.

<sup>71</sup> For this sense of κίνησις see Ross *ad loc.*

<sup>72</sup> In German and Dutch there is a one-word expression for 'white horse' ('schimmel'), so that our problem could be rephrased this way: "Does the notion 'schimmel' admit of a quidditative definiens?"

<sup>73</sup> Ross (*ad loc.*), who thinks that Aristotle "arbitrarily enough" assumes that only something that is intrinsically one qualifies for a καθ' αὐτό appellation, fails to see that for Aristotle, the condition of a thing's quidditative unity plays an important role in his metaphysical investigations.

thing in what it is in its own right or quidditatively. One of them is a failure by addition, the other by omission.

In one case the error arises because the intension of the definiendum is unduly amplified by adding a determinant. For instance, if, in defining the quiddity of \*'the pale', one were to state the account of 'pale man', evidently an improper element would be brought in by determining<sup>74</sup> the underlying 'thing' as 'man' and, accordingly, adulterating the quidditative notion 'pale', since paleness does not as such include manhood. The failure by omission goes the other way round, in that with respect to the expression ἰμάρτιον, if used for 'pale-man', one erroneously zooms in on the constituent 'pale' and omits the other constituent 'man', so that 'pale-man' is intensionally narrowed down to 'pale-thing'. It should be noted that both shortcomings are almost inevitably due to the application of the semantic device of substituting the two-word expression 'pale man' by the one-word expression ἰμάρτιον, which readily suggests that there is *one* quidditative unity at issue:

*Ibid.* 4, 1029b29-1030a3: It may be said that this quiddity [viz. being-a-cloak] is still not among the appellations designating a thing in its own right. We may reply that a thing not being named in its own right happens in two ways, one of them being from addition, the other by omission. In one case the definiendum itself is appellated by its being combined with something else, as for instance will happen if in defining 'being a \*pale' you give the account of 'pale *man*'; in the other case it is the other way round,<sup>75</sup> as, for instance, if 'cloak' signifies 'pale man', but someone defines it as <just> a 'pale' <thing>. Clearly enough, a pale man is a \*pale, but none the less, being a pale man is not being a pale <thing>.<sup>76</sup>

This passage refers to the important semantic tool, 'addition' (πρόσθεσις), which plays a role in some of Aristotle's conceptual analyses. By the logical process of πρόσθεσις the addition is intended of a substrate (e.g. 'man') which is not the primary substrate of the property in question (e.g. paleness), in a similar fashion to that in which 'nose' is the primary substrate of snubness. In the case of terms like 'snub', the primary substrate is disclosed by abstraction, by analysing, that is, the definiens of 'snub', viz. 'curved *nose*', whereas in

<sup>74</sup> From the intensional point of view this determination is an amplification of the notion 'thing', which leads to narrowing down its extension.

<sup>75</sup> Inserting οὐχ before οἶον; Frede & Patzig II, 63.

<sup>76</sup> What Aristotle means to say is that, even supposing that \*'the pale' should refer to a pale man, say, Coriscus, yet, though being referentially one and the same, they are not formally so.

the case of ‘addition’, the same process of analysis of e.g. ‘pale’ is bound to lead you to the complex notion of just ‘pale thing’, leaving the empty container ‘thing’ hollow.<sup>77</sup>

These observations bring Aristotle to the question if ‘being-a-cloak’ (τὸ ἰματίῳ εἶναι) is a quiddity at all. He goes on to determine the notion ‘quiddity’ by operationally defining it, viz. by showing what condition an appellation (account or definiens) has to meet in order to qualify for precisely grasping a thing’s quiddity. It should designate, he claims, the thing under consideration by an account that does not exceed the categorial demarcations.<sup>78</sup> Note that this passage anticipates the important Aristotelian identification of quiddity and particular definite thing informed by it, which will be dealt with from Z 6 onwards:<sup>79</sup>

*Ibid.* 4, 1030a1-6: But is being a cloak a quiddity at all? Surely not. A thing’s quiddity is what precisely it is. But whenever an appellation from a different category is used,<sup>80</sup> we do not have what precisely this particular thing<sup>81</sup> is. For instance, this particular *pale* man is not what precisely the particular is,<sup>82</sup> assuming, that is,<sup>83</sup> that thisness falls only to substances (ταῖς οὐσίαις).

### 9. 33 *On the definiens as expressing a thing’s quiddity*

In fact, the notion of quiddity signified by the phrase ὅπερ τόδε τι (‘what precisely the particular as such is’) is identified as that in default of which the thing *is* not at all. Therefore the ἰμάτιον trick will not do, since it is bound to produce two categorially heterogeneous elements united, one of which is not indispensable for there being the particular.

<sup>77</sup> The πρόσθεσις tool is also important when it comes to identifying the diverse proper objects of the theoretical disciplines: physics, mathematics, metaphysics. It is also used to solve the cognate problem of the role of matter, when it comes to properly defining material things.

<sup>78</sup> This transgression from one category to another is called κατ’ ἄλλο λέγεσθαι; see my sections 9.44, and 2.3.

<sup>79</sup> Also *Met.* H 6, 1045b7-16.

<sup>80</sup> For the precise sense of ἄλλο καθ’ ἄλλου λέγεσθαι see 1030a10ff. and my comments to *APo.* 73b35 (*pace* Ross *ad loc.*). See also De Rijk (1980), 28.

<sup>81</sup> By speaking here of the particular thing as being quidditatively defined, Aristotle anticipates the discussion of chapter 6: “Is the particular in fact identical with its quiddity?”

<sup>82</sup> Understand: by calling a particular human being ‘this pale man’ you will not grasp his or her quiddity.

<sup>83</sup> The subsequent claim will be qualified from 1030a17 onwards.

Next, there being a quiddity is conceived of together with the naming of a thing by an account that meets the strict conditions of a definiens. Once these conditions have been determined, it appears that only expressions that do not contain elements that are categorially heterogeneous (such as in 'pale man') will do. And this in fact amounts to restricting quidditative accounts or definientia to genera, species, and differentiae:

*Met. Z* 4, 1030a6-17: Hence there is a quiddity only of those things whose account is a definiens. But not wherever there is a name and an account referring to the same thing, do we have a definiens — otherwise each account would be a definiens; for there will be some name for any sets of words whatsoever, so that even the *Iliad* would be a definiens<sup>84</sup> —, rather <we have a definiens> if the account concerns some primary thing; and primary things are all those that are named by a procedure in which not of something a <categorially> different thing is said. And this means that <to have> a quiddity falls to nothing but the forms of the category in question, and these alone. For these seem to be named not in terms of participation<sup>85</sup> and attribution, and not in terms of coincidence either. But as for an account, of everything else if only it has a name, there will be one, indicating what this name means and stating that this attribute falls to this subject. Or instead of a simple account a more detailed one will be given,<sup>86</sup> but there will still not be a definiens nor a quiddity.

In the previous lines the possession of a quiddity was suggested as being restricted to the category of substance (subsistent entity), which in point of fact has simplified the problem area. Now Aristotle is going to qualify this claim, by admitting a secondary sense of the notions of definiens and quiddity, which applies to the non-substance categories:

*Ibid.* 4, 1030a17-27: Or perhaps is it that one speaks of definiens, like quiddity ('whatness'), in many ways? For indeed <the expression indicating> *what* a thing *is* signifies in one sense a thing's being-ness including this-ness, while in another each of the names from the categories quantity, quality etc. For just as 'is' falls to everything, but not in the same way — to one primarily and secondarily to the others — so quiddity too applies in an unqualified way to substance, and to

<sup>84</sup> I.e. those 24 books would be the formula answering the question 'What is the quiddity of the Homeric poem *Iliad*?'.  
<sup>85</sup> Participation is defined in *Top.* IV 1, 121a11-14 as "admitting the definiens of that which is partaken, so that, clearly, the species partake of their genera, while the genera do not partake of the species; for the species admits the definiens of the genus, but the genus does not admit the definiens of the species".

<sup>86</sup> The more precise (ἀκριβέστερος) account may further analyse the components of the simple account, even if a name of the ἰδιότιον type is involved.

the other things in a qualified sense. For indeed even of a certain quality we may ask *what* it is, and so quality belongs to the quiddities, albeit not without qualification; but just as in the case of what-is-not some people say,<sup>87</sup> playing up the linguistic form, that what-is-not *is*, not in an unqualified sense, but *is* what-is-not, so too with the category 'quality'.

So concerning each particular thing which presents itself to us we must consider how to express ourselves when naming it; but, of course, the question of how things *are* remains equally important (a27-28). With this remark Aristotle is going to zoom in on the significative function of the linguistic tools used (1030a27-b3). Having stated that the notion of quiddity is used in more than one sense, it is useful to determine the interrelationships between these senses and, by the same token, the different kinds of being they represent. The author emphasizes that the secondary senses representative of the diverse forms of non-substantial being are analogically related to those signifying substantial being, as is also the relationship between non-substantial and substantial being(ness). As usual<sup>88</sup> the analogical use of the term 'health' is taken as an illustrative example. As in 1030a21-26, at a30-32 too the use of the 'is' determined by a form from a non-substantial category ('*is so-and-so*', '*is related to*', and the like)<sup>89</sup> is explained in terms of one or another categorial 'being there'.

No matter how we would like to pinpoint the ontic situation, evidently quiddity and definiens in the primary and unqualified sense belong to subsistent entity, even though in a qualified sense they belong to non-substances (1030b3-7). Anyway, the outcome of our observations is certain, to wit, that any compound appellation by which we denote a thing has to meet the condition of being representative of an intrinsic ontic unity, not one that spans more than one category (whether or not a substantial category). It is worthwhile noting that Aristotle summarises the upshot of this chapter in terms of 'being one':

*Ibid.* 4, 1030b4-13: This point at least is clear, that the primary and unqualified kind of definiens and quiddity applies to subsistent entities. Still it similarly applies to the other things as well. But not

<sup>87</sup> Plato, *Sophist*, 236Eff.; 256Dff.; De Rijk (1986), 164-73.

<sup>88</sup> E.g. *Met.* Γ 2, 1003a33ff.

<sup>89</sup> Which is commonly (though quite anachronistically) labelled 'copulative' being, instead of an instance of 'hyparctic being' which is categorially determined; my sections 1.51 and 2.15.

primarily; for on this assumption, it does not follow that there will be a definiens of anything expressed by a corresponding account.<sup>90</sup> The account must be of a certain sort, in fact an account of something one, not by continuity like the *Iliad*, or what is bound together, but something one in one of the main senses of 'one'. Now these senses answer to those of 'be', and 'be' in one sense signifies a being-this, in another a being-of-what-magnitude, in another of-what-quality. And so there will be an account and a definiens even of 'pale man', but not in the same way as there is of paleness or of substance.

Let us briefly look into the discussion of oneness (unity) found in the Lexicon, Δ 6, in *Met.* I 1, 1052a15ff. and *Phys.* I 2, 185b5ff. (9.34-9.35).

### 9. 34 *An appendix on the notion of 'being-one' as discussed elsewhere*

In *Met.* Δ 6, Aristotle (1015b16-17) starts by his favourite distinction between 'coincidental' (κατὰ συμβεβηκός) and 'in its own right' (καθ' αὐτό). What is one coincidentally is called so *either* because of its having non-subsistent components, which coincide owing to their inherence in one subsistent entity, *or* since one (or more)<sup>91</sup> non-subsistent component(s) coincide(s), inhering in another, third component, which is a subsistent entity:

*Met.* Δ 6, 1015b17-36: Coincidentally one is for instance <that which is named by> 'Coriscus' and \*'the educated' and 'educated Coriscus'; for to say 'Coriscus' and \*'the educated' and 'educated Coriscus' comes to the same; and equally so in \*'the educated', and \*'the upright', and 'educated and upright Coriscus'. For all these are called one coincidentally, \*'the upright' and \*'the educated' because they coincide with one substance, \*'the educated' and 'Coriscus' because one coincides with the other. Equally 'the educated Coriscus' is in a way one with 'Coriscus', because one of the portions figuring in the account coincides with the other, I mean \*'the educated' with 'Coriscus'. And 'the educated Coriscus' is the same as 'upright Coriscus', because a part of each is coincidentally one with one and the same thing. The case is similar if what is coincidental concerns <what is named by> a generic or some <other> universal name.<sup>92</sup> So for instance 'man' and 'educated man' is the same; for it is either

<sup>90</sup> Owing to the ambivalent meaning of the verb σημαίνειν (used of both the expressions and their significates; see my section 1.71), the Greek text is somewhat confusing, literally meaning "a definiens of whatever signifies the same as an account <of it>". For the ambivalent meaning of σημαίνειν see also Sluiter (1997), 152.

<sup>91</sup> As exemplified at b19-20.

<sup>92</sup> The broader notion καθόλου also comprises differentiae and propria (essential properties), and possibly also (at times) the connotative features 'being' and 'one', the 'termini transcendentis' of Medieval thought.

because 'what is educated' coincides with 'the man', being one and the same subsistent entity, or because both coincide with a certain particular thing, as for instance Coriscus — except that the two do not fall to him in the same manner, but one doubtless as an appellation in the category of substance,<sup>93</sup> the other as a state or affection of the substance. All things called one coincidentally, then, are so called in this way.

Clearly, Aristotle is speaking about the different appellations by which one and the same thing, viz. the educated, upright man, Coriscus, may be designated.<sup>94</sup> In fact, the man may be called up — no matter if the name will be used as a subject or predicate term of a statement about him, or just for mentioning or summoning him — by several expressions: 'Coriscus', 'the educated Coriscus', '(this) educated' <person>, '(this) upright' <person>, '(this) educated man', 'the educated, upright Coriscus', and so on. What is at the focus of interest here is the logical feature that these (and similar) expressions semantically (or rather 'referentially') coincide, not the ways in which that which is denoted by the diverse names ontologically forms a unity in Coriscus. Despite the fact that the latter are diverse ways of denotation (as is meticulously explained in b21-34), from the logico-semantic point of view they are all coincidental appellations (b20-21; 34-36).<sup>95</sup> Of course, the semantic Main Rule, RSC (my section

<sup>93</sup> My rendering of ὡς γένος καὶ ἐν τῇ οὐσίᾳ, in which γένος must have the broader sense of 'category' ('man' being a species, not a genus), and καὶ should be taken explicatively.

<sup>94</sup> Matthews (1982, 225f.), against the hard evidence of *Top.* I 7, 103a32-39, endorses the opposite view and takes Aristotle to consider 'accidental unities' (like 'seated man', 'walking man') as *things* (baptized by him 'kooky objects'), instead of alternative *descriptions*, meant to simply pick out one and the same subsistent thing, say, Coriscus. He (226) challenges "anyone who thinks that, according to Aristotle, 'the man who is sitting' and 'the musical one' simply pick out Socrates", (to) explain why Aristotle distinguishes the sense of 'same' in which one says 'The man who is sitting and Socrates are the same' from the sense of 'same' (that of 'its most literal and primary use') in which one says 'The man and the animal that walks on two feet are the same'." Matthews's question ignores the crucial difference between 'coincidental unit' and 'quidditative unit' (e. g. 'two-footed animal' as the proper definiens of man). Thus the staggering implications (225: "When the man rises, the seated man ceases to be; when the woman awakens, the sleeping woman passes away; when the baby cries, the silent baby perishes") do not concern Aristotle's view, and rather resemble the Sophists' attacks on Plato and Aristotle. Incidentally, Aristotle's view of the matter should be assessed in the broader context so convincingly established by Owen (1961) of Aristotle's interpretation of φαινόμενα, which "must be understood to be our beliefs and interpretations, often as revealed in linguistic usage". Likewise, the 'accidental unities' are not belief-free things, but testify to our usage and the structure of thought and belief which usage displays.

<sup>95</sup> The problems raised by Kirwan (133-135) seem to be due to ignoring this. Ross too (II, 301) interprets this passage in terms of ontic unity, and therefore

1.71) should not be forgotten: the phrase 'what is named coincidentally' is used to stand for neither the appellation as linguistic tool nor the things referred to *as such*, but the things *as called up* by this or that appellation.

Next, the opposite group is addressed, viz. what is called one in its own right, which again should be taken to refer to 'things as denoted by appellations that they are entitled to in their own right'. The appellations involved are divided as follows:

(a) those denoting things qua being one from being continuous, either naturally or artificially (1015b36-1016a17);

(b) those denoting things whose substratum (either the proximate or the ultimate) is specifically undifferentiated, i.e. those things the form of which is perceptually indiscernible. In this sense wine and water and meltables are called one (1016a17-24).

The other two kinds are philosophically of greater concern:

(c) those denoting things whose genus is one, being differentiated by opposite differentiae. Generic unity is explained in terms of the genus acting as the substratum of the differentiae:

*Ibid.* 6, 1016a24-32: Things are also called one whose genus is one, being differentiated by opposite differentiae; and these are all called one, because the genus, which is the substratum of the differentiae is one, as for instance a horse, a man, and a dog are something one in that they are all animals, in much the same way indeed in which things are whose matter is one.<sup>96</sup> The things called generically one are sometimes called so in the above way, but sometimes their higher genus is <that after which they are> called the same (if they <themselves> are the *infimae species* of the genus); I mean the genus above the proximate genera, as for instance the isosceles and the equilateral are one and the same *figure*, because both are triangles, but they are not the same kind of triangles.

Either way, these things are called one *because of* (and *after* indeed) an essential likeness, which, however, only concerns the generic level, either that of the proximate genus or that of a higher genus. None the less, they can all be called up after that common generic appellation in their own right. Thus Socrates may be called up by 'this animal', 'this living being', and so on.

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seems to miss the point.

<sup>96</sup> The Greek text has the brachylogical expression "in which matter is one". A similar brachylogical construction is found at a29-30. Note that in this context, in which 'genus' = 'matter', generic formal identity, rather peculiarly indeed, is put on a par with referential (= material) identity.



(d) The fourth group concerns specific unity. If anywhere, here it becomes patently clear that Aristotle is dealing not with ontic situations as such, but as those called up by different appellations, which implies *one and the same* thing (πρᾶγμα) being designated differently. Of course, in this case it is of paramount importance to recognize the unity of what is denoted in different ways, instead of being misled by the diverse appellations. It will not come as a surprise then that in Aristotle's exposition of this sense of oneness the relationship between a significative account and what is signified or denoted by it is at the focus of interest; in a way the two are one, in another they may (or even should) be distinguished. They are one qua referring to what is really one and the same thing; they are not in so far as the account as such can be marked off from what is signified or referred to by it. Along these lines (viz. of referential vs. formal identity) the next passage should be understood:<sup>97</sup>

*Ibid.* 6, 1016a32-b3: Again, there is talk about one thing when the account indicating a thing's quiddity <with respect to its reference><sup>98</sup> is indistinguishable from another account which indicates the thing in its actual circumstances;<sup>99</sup> for taken by itself every account is distinguishable [i.e. can be opposed to what is referred to by it].<sup>100</sup> In this way what has grown and is diminishing is still one and the same thing, owing to the fact that its definiens is one, just as in the case of planes <of different sizes> the definiens of the form is one.<sup>101</sup> In general when the notion of the quiddity of certain things is indistinguishably the same, and they cannot be diversified in terms of time or place or description, then there is above all oneness, and among these cases the substances take pride of place.

What is at issue here is the material (or referential) identity of one and the same particular, which exists whenever it is called up by

<sup>97</sup> Both Ross (followed by Tredennick, Tricot, Warrington, Reale) and Kirwan failed to observe that here (1016a32-b3) Aristotle is dealing with cases in which there is a risk that numerical unity is not recognized, owing to our using different accounts for one and the same thing. Especially the lines b1-3 strongly support the present interpretation. For the views of Tredennick and Kirwan as in part opposed to those of the others see my note 103.

<sup>98</sup> This tacit qualification counterbalances the explicit modification of a34: αὐτὸς καθ' αὐτόν.

<sup>99</sup> For this sense of πρᾶγμα see my *Index s.v.*

<sup>100</sup> The common interpretation "is distinguishable <into genus and difference>" does not make sense.

<sup>101</sup> Meaning that in this case the identical quiddity 'plane' makes each of them to be one and the same. It should be noted that in this context, i.e. of mathematical entities, the identity of this particular specimen drawn here and now as numerically distinguished from that of another one, is left out of consideration.

different names: for instance, if one and the same person, say, Coriscus, is called both 'this man' and 'this animal'. Likewise, other cases are examined in which there is referential identity, despite a thing's having grown larger or smaller, as for instance if we call up both the young and the elderly Coriscus by the appellation 'this man', or 'this boy' or 'this old man', and so on.

To highlight the privileged position of substance in matters of self-identity (and in its capacity of bestowing identity to non-subsistent entities)<sup>102</sup> Aristotle frames a rule of thumb concerning the different matching levels on which the notions of 'being one' and 'being indistinguishable' are found:

*Ibid.* 6, 1016b3-6: For universally such appellations as do not admit of being referentially split up are called one in that respect in which they do not admit of it. For instance, in so far as 'man' does not admit of being referentially split up, there is talk of one man <numerically><sup>103</sup>; and in case of a similar use of the appellations 'animal' or 'magnitude', there is one animal and one magnitude.

The remaining part of the chapter contains some loose additional observations. Firstly (1016b6-11), there is a remark about the different grounds on which things are called one (among which the role of substance is given the place of honour once more). Next (b11-17), the role of having continuous parts is discussed, and the relationship of unity, number and measure. Finally, prior to its brief discussion of the notion 'many' (1017a3-6), the Lexicon summarizes the different senses of 'one', this time from the ontological point of view:

*Ibid.* 6, 1016b31-1017a3: Some things are one with respect to number, others to species, others to genus, others analogically. Numerically the things whose matter is one, specifically those whose definiens is one, generically those whose figure of appellation is one, analogically those which are related as a third thing to a fourth. In every case the latter types of oneness are implied in the former, as for instance what is numerically one is also specifically one (but what is specifically one is not all numerically one); and what is specifically one is also generically one (but what is generically one is not all specifically one); it is, however, analogically one; and what is analogically one is not all generically one.

<sup>102</sup> Ross (*ad loc.*) has rightly observed that Aristotle means to say that since the other categories are dependent on substance, the unity of things in them depends on the unity of substance.

<sup>103</sup> Unlike Tredennick and Kirwan, Ross, Warrington and Tricot all take Aristotle to be speaking of specific and generic unity.

9. 35 *The discussion of oneness in Met. I, chs. 1-2. Connotative 'one'*

In the opening chapter of *Metaphysics* I, Aristotle begins his discussion of oneness by recalling (1052a34-b1) the different senses of 'one' as dealt with in  $\Delta$  6. He confines himself this time to the καθ' αὐτὰ λεγόμενα and summarizes them under these four headings. They are presented in two pairs ((a)+(b) and (c)+(d)), the elements of which in a way overlap:

(a) that which is continuous, either in general or by nature and not by contact nor by being tied together (a19-21);

(b) that which is a continuous whole and has a certain shape and form (μορφήν καὶ εἶδος), especially if it has in itself the cause of its continuity (a22-25).

As in  $\Delta$  6, natural unity is defined in terms of being ἀδιαιρέτος:

*Met.* I 1, 1052a25-28: Such are things because their movement is undivided in place and time. Hence it is clear that if a thing has by nature a principle of local and circular movement, this is primarily *one* extended thing.

The remaining two types are linked together and comprised under the heading 'those whose definiens is one'. They concern:

(c) what is numerically one;

(d) what is specifically one.

*Ibid.* 1, 1052a29-34: Some things, then, are one in the above way, *qua* continuous and whole, and the other those the apprehension of which is undivided; undivided, that is, because it is an apprehension of what is specifically or numerically undivided; numerically, then, the particular is undivided, and specifically, that which in apprehensibility and in knowledge is undivided. Hence that which causes substances to be one [i.e. the *infima species*] must be one in the primary sense.

At the end of this survey the four senses are presented once again as two pairs:

*Ibid.* 1, 1052a34-b1: What is one, then, is called so in all these senses: what is naturally continuous and what is naturally a whole, and what is particular and what is universal. And all these are one because of undividedness, in the former cases the undividedness of the movement, in the latter ones that of the apprehension and the definiens.

Ross failed to observe the pairing off of the four senses, and so thinks (II, 182) it is rather surprising to find the fourth kind of unity described as τὸ καθόλου, because what Aristotle says about it at a31 suggests only the *infima species*, which is the least universal of universals.

As before at *Met.* Δ 6, 1016a35, Ross understands by ἀδιάιρετος something like 'incapable of being logically analysed', and denies this feature to genera and species, since they can be analysed into a (higher) genus and a differentia. However, the word has a different meaning in all these contexts and, in the present context in particular, it refers to the undividedness and indissolubility of a thing's quiddity from the particular as a whole.<sup>104</sup> Therefore the members of the second pair are so closely related as to be both subsumable under the heading 'that which is one by apprehension and definition'. What is apprehended is a certain essence *as immanent in* a particular, or, to put it the other way round, a certain particular is apprehended after its quiddity.

We have to be aware time and again that for Aristotle what is universal only has existence qua enmattered in a particular being. On this view, one and the same particular can be called numerically one qua differing, owing to its own immanent quiddity, from another particular having the same quiddity. By the same token, then, in its being apprehended and known this particular quiddity is still undivided, but it is given a universal status to be shared by the quiddity of other particulars. In a similar vein, Aristotle can assert (*Met.* I 2, 1054a9-19) that in a sense oneness is the same as beingness, because like beingness, it is found in all the categories, and it adds nothing to a term's meaning, no more than its twin notion, 'being' (which too, semantically, is an empty container) does. And beingness and oneness are on a par since for a thing to be one is to be a definite particular.<sup>105</sup>

This brings us to say a few words about 'connotative one'. At *Met.* Γ 2, 1003b22-24, the notions 'being' and 'one' are said to be co-implicative, although they are formally different: what *is* is *one*, and the other way round, but 'being-ness' is not the same as 'one-ness'. Their being exchangeable rests on their being grammatically parathetic: i.e. being attached to whatever form (εἶδος) they do not add semantically anything to its meaning. In Aristotle's words (*ibid.*): "The expression

<sup>104</sup> See my section 9.44.

<sup>105</sup> Cf. *Phys.* I 2, 185b6. This point of comparison between 'one' and 'be' is alluded to at *An.* II 1, 412b8-9. The conceptual emptiness of 'one' and its implementation by the different categorial modes of being is discussed in *Phys.* V 4. The fact that the bare notions, 'be' and 'one' are implied in any categorial designation (and therefore need not be 'added to' it) is lucidly explained at *Met.* H 6, 1045a36-b7 (my section 10.6). Ultimately, this is why ἄνθρωπος is conceptually the same thing as εἰς ἄνθρωπος and ὢν ἄνθρωπος (*Met.* Γ 2, 1003b26-32; my section 1.64).

'one-man' equals 'man' just as 'man-being' equals 'man', and that is why 'being' and 'one' can be put on a par".<sup>106</sup> At *Met.* H 6, 1045a36-b7, this idea is worked out by Aristotle claiming that both parathetic 'attributes' concern individual subsistent being, including its coincidental modes of being. Their parathetic character is indicated by him saying that neither the *one*-element nor the *be*-element is expressed in the definiens of subsistent or coincidental being, and the quiddity of each of them *eo ipso* (εὐθύς) is by its very nature a kind of one-ness in the same way as it is a kind of being-ness. Things possess these 'attributes' without there being any cause (αἴτιον) outside themselves. Thus one-ness and being-ness are intensionally connected by their semantic emptiness (my section 10.6), and so have their being connotative in common (my section 1.64).

In the present chapter, as we just saw, connotative one-ness is identified as conveyed by the second main sense of 'undivided-ness': the undivided-ness, that is, which concerns 'apprehension and definition' (1052a34-b1). In this sense, a thing's being-one bears on its being essentially a 'this' and 'capable of being isolated either in place or in form or in thought'.<sup>107</sup>

It is this connotative one which, from the beginning of the 13th century onwards, together with connotative 'being', came to belong to the six 'termini transcendentis', 'ens', 'unum', 'verum', 'bonum', 'res', 'aliquid'.<sup>108</sup> Halper (213f.) rightly opposes the interpretation of

<sup>106</sup> Also *Met.* Z 16, 1040b16-24 (my section 9.75); H 6, 1045a36-b7 discussed presently, and in my section 10.6. Cf. *Phys.* I 2, 185b6; V 4, 227b3. Halper rightly addresses (1985, 217; 227) the relationship between 'one' and 'being' in terms of what he calls 'intensional connection', thus avoiding the less informative designation 'co-extensiveness'. Note that all the same this connection is a relationship of being co-implicative rather than formal identity.

<sup>107</sup> Lexicon, *Met.* Δ 6, 1016b31-33. At 1016b8-9 it is said that "what is called 'one' in the primary sense is that whose ousia is one κατ' εἶδος" or (1016b31-33) "whose definiens is one". Although Aristotle indicates (*Met.* I 1, 1052b18-24) the quantitative aspect of 'measure' as the semantic origin of the term 'one' as it is used in its metaphysical sense, Cleary (1995, 370ff.) unduly presses this remark to deny (*contra* Morrison, 1983) that the whole passage shows that 'being indivisible' is really the essence of unity (Cf. *Met.* I 1, 1053b7-8). To my mind, Aristotle's remark is primarily grammatical.

<sup>108</sup> The first systematic account of these six notions is found in Philip the Chancellor's *Summa de bono* (c. 1225-28), who calls them 'communissima' (see J.A. Aertsen, "Transcendens– Transcendentalis. The Genealogy of a Philosophical Term" in: J. Hamesse & C. Steel (eds.), *L'élaboration du vocabulaire philosophique au moyen âge*. Brepols Turnhout, 241-55). In the *Dialectica Monacensis* (first quarter of the 13th cent.) the term 'transcendens' is used to indicate nouns or principles common to things from any category, and thus transcending the predicamental order or 'linea predicamentalis' of universal terms. See De Rijk (1967) II, 556<sup>17-19</sup>

*Met.* Γ 2, 1003b22-23, given by Medieval authors from Philip the Chancellor (*d.* 1236) onwards, as concerning two convertible transcendent terms, to the view held by "most Anglo-American commentators and also Alexander of Aphrodisias, who all reject the passage as expressing the identity of the extensions of two terms". The dispute is, he says, whether these two terms are connected intensionally, or extensionally. His rejection of the label 'transcendent'<sup>109</sup> as far as Aristotle is concerned is surely correct. However, his arguments for the rejection of the common view of Aristotle's 'being' and 'one' as merely meant as two terms of universal co-extension are beside the point, I am afraid. The common view that *Met.* Γ 2, 1003b22-23 characterizes One and Being as just coextensive is inappropriate for quite a different reason. What Aristotle tries to say is (as also appears from the numerous parallel passages) that as a result of their common character of merely being connotative, they have the same universal (the most general indeed) applicability, which, understandably, can be understood in terms of coextensivity.<sup>110</sup> This coextensivity, however, is due to their common semantic character as categorically 'empty container'.

The association of Aristotle's 'one' and 'be-ing' with the Medieval notion 'transcendens' is misleading enough. Firstly, because in its logical use this label also applies to notions such as 'universale', 'possibile', 'contingens', and others that are 'transpredicamental'. Secondly, and more importantly, in its metaphysical use it is quite alien to Aristotelian thought, in which, unlike with Plato, the concept of 'be' is empty, because it is the form which yields a thing's being, thus implementing its *hyparxis* ('forma dat esse'). In other words: Aristotelian metaphysics is a metaphysics of forms, not a 'Seins-metaphysik'.

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and 560<sup>34</sup>-561<sup>1</sup>: "[...] nomina transcendentia. Qualia sunt haec: 'res', 'ens', 'unum', 'universale', 'possibile', 'contingens', 'idem', 'diversum'"; cf. *ibid.*, 607<sup>19-21</sup>.

<sup>109</sup> In fact, Halper uses the anachronistic term 'transcendental', which is utterly inappropriate (1) because of its Kantian connotation, and (2) since it is also historically inaccurate, given that the Medieval metaphysicians never spoke of 'transcendentalis', and this term did not appear until Suarez, *Disputationes metaphysicae* (1597). In Medieval Latin, when used as a technical term, the word 'transcendens' always signifies 'beyond the predicamental order'.

<sup>110</sup> Cf. *Met.* K 3, 1061a15-18 and *Top.* IV 1, 121b7-8.

9. 4 *How to grasp a thing's ousia properly*

In chapter Z 5, the ambivalence of the term οὐσία, which means 'subsistent entity' ('substance') and 'quiddity' ('essence') at the same time, raises an intriguing question. The formal difference between the two is beyond all doubt: a particular thing of the outside world is surely not the ontic cause inhering in it. If they were completely the same, empirical knowledge (however unreliable it is, though) would be the only kind of cognition there is and, by the same token, the Greek ideal of steadfast, genuine knowledge (ἐπιστήμη) would be delusive. So to properly evaluate the difference between substance and quiddity is of decisive importance to any Greek philosopher. To Aristotle, this task boils down to forwarding his alternative for Plato's strict separation of these two.

Given his linguistical approach to the metaphysical questions at stake, his search for the true οὐσία in particular, it is all but unexpected that Aristotle now proceeds to ask if to properly (or definitorially) *conceive* or *speak of* a particular should come to *conceiving* or *speaking of* its quiddity. In light of the foregoing discussions the preliminary reaction to this question must be an attempt to certify by what name or phrase the particular under consideration is brought up.

9. 41 *On one-word expressions including an intrinsic determinant*

The investigation starts by refining the problem concerning compound entities which was addressed earlier. In fact, compound entities of the 'pale-man' type (i.e. those which are called up after one of their coincidental features: τὰ κατὰ συμβεβηκὸς λεγόμενα) have already been discarded in the previous chapter. At this point, what needs to be considered are *those* designations among the ones which call up their referents after their essential feature (τὰ καθ' αὐτὰ λεγόμενα), which include an intrinsic determinant. The problem, then, is that such determinants may remain hidden, because they are designated by a one-word expression.<sup>111</sup> For instance, τὸ

<sup>111</sup> The one-word expressions meant here refer to things including an intrinsic determinant, unlike the tricky expression ἰμάτιον, used earlier to replace the two-word expression λευκὸς ἄνθρωπος ('pale man'), which contains an extrinsic determinant. Note that the phrase ἐκ προσθέσεως here (as at 1031a4-5, where it will be defined) concerns intrinsic determinants, while at 1029b31 (as well as elsewhere, e.g. *Top.* II 11, 115a26; III 3, 118b10; 119a23) extrinsic determinations are

σιμόν ('snub'), τὸ ἄρρεν ('the male'), which both contain an intrinsic determinant, 'nose' and 'animal', respectively:

*Met. Z* 5, 1030b14-28: If one denies that an account framed from an addition is not a definiens, there is a difficulty, viz. <whether any, and if so> *which* of the <things that are named by> coupled terms and not simple ones will be definable. For these must be disclosed by adding something. For instance, supposing we have to do with a nose and concavity, and with snubness as that which results from the combination of these two by the presence of the one in the other. And <take notice of this> it is not coincidentally that concavity or snubness is an attribute of the nose, but they are so in virtue of themselves, and not in the way in which paleness falls to Callias, or to man, viz. because Callias, who happens to be a man, is pale, but rather in the way that masculinity falls to an animal, and equality to what is a magnitude, and generally in the way that anything may be said to fall <to something else> in virtue of itself. These are the attributes in which either the account or the name of that which they are attributes of occurs, and which cannot be disclosed without <adding> this attribute. Thus the appellation \*'the pale'<sup>112</sup> can be disclosed without reference to man, but femininity not without reference to animal. Therefore either none of <the things designated by> these appellations have a quiddity and a definiens, or, if they do, it must be in another way, as explained before.

An additional problem arises in this matter (1030b28-1031a1), since sometimes the compound notion may be equivalently signified by a one-word expression (being a neuter substantivated adjective) like τὸ σιμόν ('the snub') and by the same adjective used adjectivally to refer to the intrinsic attribute of the substance, viz. σιμὴ ῥίς ('snub nose'). If, then, a snub nose is the same as a concave nose, 'snub', one might infer, is the same as 'concave', but this is not true, because 'snub' implies a reference to 'nose', while 'concave' does not. And if 'snub' = 'snub nose', an infinite regress is unavoidable, Aristotle asserts, viz. snub nose nose etc., which is not an attractive perspective to someone who tries to define the snub. So the former problem suggests that the definiens should include the specific substratum, and the latter that it must suffer from a pleonasm.<sup>113</sup>

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involved. At *Int.* 12, 21b27-30, 'connotative being' included in assertibles is called an 'addition' (πρόσθεσις).

<sup>112</sup> Time and again one should realize that the Greek expression does not contain such a dummy term as '<thing>', which in fact would often trivialize Aristotle's claims; see my *Index s.vv.* 'thing' and 'substantivation'.

<sup>113</sup> Ross (II, 173f.) has aptly elaborated and commented upon this passage, and rightly observed that re *SE* 31, 182a4-6, the infinite regress argument is refuted. See also Frede & Patzig II, 82-5, and Bostock, 98-100.



It does not come as a surprise, therefore, that in the concluding section of the chapter (1031a1-14) Aristotle claims that things designated by coupled terms, including those containing an intrinsic determinant, cannot be properly defined, since they always involve the addition of a substratum, which is alien in a way to the notion expressed by the term determined; or, in other words, they always involve a transgression of the categorial boundaries (1031a2-5). If they do have a definition, then either it must be in a different way, or the terms 'definiens' and 'quiddity' are to be taken in an improper sense. Anyway, only that which is precisely brought up as a subsistent being is properly definable, Aristotle keeps claiming.

From the anthropological point of view, an interesting corollary may be drawn on Aristotle's behalf, that if a man or woman are distinctly called up as τὸ ἄρρεν ('the male') and τὸ θῆλυ ('the female'), gender should be considered an incidental feature, not an essential one, because their most quidditative property is 'being human', just as the quidditative nature of snub merely is 'being a nose'.

#### 9. 42 *Does a thing's quiddity coincide with the particular itself?*

Once the substance has been given the exclusive privilege of definability, any anti-Platonist is forced to answer the question whether a thing's quiddity as indicated by the definiens coincides with the particular itself. In Aristotle's view, the only way a quiddity can exist at all is indeed if it is embodied in *this* or *that* particular of the outside world. It will be clear, therefore, that in chapter six the semantic ambivalence of the word οὐσία is at the focus of interest:

*Met. Z 6, 1031a15-18:* We must consider whether it holds of each thing<sup>114</sup> that it is the same as, or different from, its quiddity. This is useful for our investigation of the ousia; for each thing is thought not to differ from its own ousia [i.e. substance], and a thing's quiddity is said to be its ousia [i.e. essence].

Throughout the discussions of this chapter, the semantic approach to the matter is predominant.<sup>115</sup> Naming<sup>116</sup> things and, by the same token, things *qua named* in diverse ways, are focussed upon, not the

<sup>114</sup> Again, ἕκαστον is dominantly used; my *Index s.v.*

<sup>115</sup> De Rijk (1980), 29-33.

<sup>116</sup> Both one-word expressions (names) and many-word expressions (phrases, accounts) may be used. Therefore, I use the generic terms 'name', 'appellation' (said both of the act and the product).

things as such, irrespective of the way in which they may be brought up for discussion. To Aristotle, *all* things are particular things which are referentially identical with their essence ('quiddity'), since each essence is an immanent *eidos*. So far there is no problem, at least from the doctrinal angle. Problems may arise, however, as soon as things are *called up* by all sorts of names, and thus different formal aspects of these things come to the fore.

As long as the appellations call up the thing in its entire nature (when for instance, we designate Callias by 'this man'), or an expression is used that signifies a thing's essential component ('this animal', 'this rational being'), there is no problem either. Things thus named are labelled by Aristotle τὰ καθ' αὐτὰ λεγόμενα, not to be rendered 'so-called self-subsistent things' (Ross and others),<sup>117</sup> as if the things by themselves were meant, but 'things *named* in their own right' or rather 'things *named* after a quidditative mode of being'.

The counterpart of this manner of appellation occurs whenever things are called up after some of their coincidental modes of being, e.g. when Callias is designated as \*'the pale', or \*'the musical', and so on. Again, not the thing by itself is under consideration, but the thing *qua* designated by a coincidental appellation. Therefore renderings such as 'accidental things'<sup>118</sup> miss the point completely. Clearly, \*'the pale' (τὸ λευκόν) said of Callias does refer to a self-subsistent entity. However, whenever the subsistent entity, Callias is designated by the appellation \*'the pale', he is given a name on account of a coincidental mode of being of his. And this, as Aristotle never tires of arguing, is not a promising start for discovering a thing's true substance.

Returning now to the initial problem of the relationship between a particular and its quiddity, we see Aristotle tackling it precisely from the angle of naming:

<sup>117</sup> "Êtres appellés êtres par soi" (Tricot); "cose che sono per sé" (Reale I, 582).

<sup>118</sup> "Cose che sono per accidente" (Reale I, 582). Tricot has "l'être dit par accident", Ross, "accidental unities", Tredennick and Warrington, "accidental predications". Bostock correctly renders "things spoken of coincidentally" as opposed to "things spoken of in their own right", but thinks it is not entirely clear how we should take this distinction. As may be expected, Bostock has blocked the way to understanding the importance of this distinction by his continuously confusing semantics and syntax and explaining any way of calling up in terms of sentence predication, including its multifarious (modern, *unAristotelian*) diversifications. See especially his comments at 104-7 and his *Epilogue* to Z 4-6 at 116-8. Several other interpreters keep speaking of 'accidental *objects*', e.g. Matthews (1991): 'cooky objects'.

*Ibid.* 6, 1031a19-24: In the case of things which are **called up** after a coincidental mode of being, the two would seem to be not the same, as for instance pale man is not the same as the quiddity of pale man. If they were the same, then the quiddity of man and of pale man would also be the same; for a man and a pale man are the same, as they say,<sup>119</sup> and, therefore, the quiddity of man and pale man would be the same.

Aristotle then questions (a24-25) the validity of this reduction *ad absurdum* by remarking that the syllogistic framework underlying it is not valid, because the premisses jump from formal to extensional identity. An alternative reduction is suggested and rejected (1031a25-28).<sup>120</sup>

#### 9. 43 *The special position of τὰ καθ' αὐτὰ λεγόμενα*

Next, the case of τὰ καθ' αὐτὰ λεγόμενα is submitted to an extensive discussion. When arguing for his own position, that in the case of things that are brought up by naming them after their essential nature, there really is a relationship of sameness between particular thing and its ontic cause, the essence, Aristotle finds his first piece of evidence in Platonic doctrine (1031a30-b11). Even on the assumption that there are such things as the Platonic Forms, he argues, his own thesis turns out to be mandatory.<sup>121</sup> The existence of transcendent Platonic Forms indeed can only be interpreted by its adherents, Aristotle claims, on the footing of the sameness of their quiddity and substance. For if Goodness-Itself and the quiddity of 'good' are different, then there must be another substance over and above it, which will be prior to it; and the same will hold for Animality-Itself and even for Being-Itself;<sup>122</sup> in a word, there would be ontic causes

<sup>119</sup> I.e. in normal usage, the designations 'man' and 'pale man' refer to the same substance.

<sup>120</sup> Both arguments are aptly explained by Ross, Frede & Patzig, and Bostock *ad loc.*

<sup>121</sup> Cf. Frede & Patzig (96), who rightly take an additional argument to run from 1031b7 to 10. The procedure of supporting his own view in the light of Plato's metaphysics of Transcendent Being has caused some confusion among interpreters. Ross (II, 177) thinks it is not obvious why Aristotle should have chosen "a class of καθ' αὐτό terms which he does not believe in, the Ideas" to illustrate his own thesis, and ascribes his choice to his intention to make "a covert criticism" of the theory of Forms. Bostock (107) even suggests that "perhaps Aristotle chooses these examples here because he does not feel it appropriate to offer his own examples yet". Your argument gains some extra weight indeed, if your opponent turns out to have a similar view, *mutatis mutandis*, of course.

<sup>122</sup> 1031a32-b1 and b7-8. Note at b7-8 the idiomatic construction running

prior to the Forms. In addition, if the two are separated from one another, the Forms will be unknowable (since the 'what-is-it?' question cannot but remain unanswered, for we only know a thing when we are familiar with its quiddity).<sup>123</sup> The separation works out, then, in either direction: the Forms fail to possess quiddities and thus are themselves devoid of the properties they are supposed to communicate to the outside things, and, on the other hand, the quiddities 'goodness', 'beingness', 'oneness' do not find themselves among the *things that are, are good, are one*.

The new argument prompted at 1031b11-18 starts with drawing an absurd conclusion from the opposite thesis (running that in case of τὰ καθ' αὐτὰ λεγόμενα, the thing and its quiddity *do not* coincide), to wit that what the quiddity of 'good' does not fall to, is itself not something good (b11). To be sure, for Aristotle this conclusion is just as unacceptable as it is for Plato. In Aristotle's view, to be such-or-such comes down to possessing a certain quiddity as an immanent property.<sup>124</sup> It would be, of course, no less destructive to Plato's fundamental thesis, to the effect that the outside thing partaking in some Form is entitled to bear this Form's name.<sup>125</sup>

Anyway, irrespective of your ontological preference, you should infer that what is good (what is Good, respectively) and its quiddity are one and the same, and likewise what is beautiful and its quiddity. And this holds for anything that is not named after something different from its proper nature, but in its own right and primarily. And, Aristotle concludes, this is conclusive enough if there are Forms as well as if there are not; but even more perhaps if there are, he adds (b11-15).<sup>126</sup>

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literally: "what holds for the other things holds also for 'good'", but meaning to say "what holds for 'good' holds also for other things". The sentence is aptly rendered by Bostock "the case of goodness is no different from any other". For this construction, even found in phrases like A οὐ μᾶλλον ἢ B, meaning, not 'B as much as A', but 'A as much as B', see De Rijk (1950).

<sup>123</sup> Note the correlation between 'quid?' and 'quiddity'.

<sup>124</sup> I cannot understand why Frede & Patzig (98) are of another opinion.

<sup>125</sup> See De Rijk (1986), *s.v.* ὄνομα. Of course, this does not mean that the common name is a common sentence predicate, such as to justify a statement like "The Beautiful is beautiful". On the non-problem of the "self-predication" of Forms (including "Pauline predication"), De Rijk (1986), 316-26; on the absence of any theory of sentence predication in Plato, *ibid.*, 74-6; 146-53; 296-300, and *passim*. Also my *Index s.v.*

<sup>126</sup> A footnote-like remark (1031b15-18) follows that if the Forms are such as some people hold, the substratum partaking in them will not be οὐσία, since the Forms must certainly be οὐσίαι (subsistent entities), but not owing to something underlying them; for if that were so, they would not be subsistent by themselves,

9. 44 *On the phrase* κατ' ἄλλο λέγεσθαι

Before discussing Aristotle's further elucidation of the main thesis of this chapter ('thing' = its quiddity), it is worthwhile dwelling on the basic condition required for its being true, viz. that the things under consideration should be named in their own right or after their proper nature, and not in virtue of one of their incidental features or concomitants. The negative formula of this basic requirement, which earlier (1031a18ff.) was couched in terms of not 'being named after some concomitant feature' (κατὰ συμβεβηκὸς λέγεσθαι) is now (1031b13-14) paraphrased as not 'being named after something else' (κατ' ἄλλο λέγεσθαι). The requirement thus phrased means that in naming outside things, you should not transgress the categorial boundaries, either by naming something from the category of substance after a non-substantial category (e.g. calling up Callias as \*'the pale'), or the other way round, as when, for instance, a pale man is under discussion, one takes the immanent quiddity 'paleness' to be formally identical with the pale man or the man.<sup>127</sup>

That also things from non-substantial categories can be named in virtue of themselves, in terms, that is, of the appropriate category, becomes clear in the next paragraph of this chapter. There the general conclusion will be drawn and implemented, and an important distinction will be drawn between two opposite senses of the phrase τὸ κατὰ συμβεβηκὸς λεγόμενον.<sup>128</sup>

Aristotle now resumes the foregoing discussion in his own ontological perspective, leaving out Plato's doctrine on the subject. It is argued that while to know a thing is to know its quiddity, each instance of obtaining knowledge of some [x] or [y] boils down to the factual identification of that thing with its quiddity; otherwise indeed

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but solely owing to their being partaken in by some substratum.

<sup>127</sup> De Rijk (1980), 30f., with the notes 30 and 31. See also Z 11, 1037b1-4, below. Ross (re 1031b13) has well observed that in principle not only terms from the category of substance are involved, but also those from the non-substantial categories, "in fact presumably all terms except compounds of terms in two categories (1029b23) like 'white man' (1031a20)". I would prefer, though, not to speak of 'terms' from a category but 'things named' after a category. Frede & Patzig (98) claim that, when speaking of κατ' ἄλλο λέγεσθαι, Aristotle has cases in mind like saying of Socrates that he is blond, while in fact only something coincidental such as the fair colour of his hair is involved; but their example rather runs in terms of the generic notion of κατὰ συμβεβηκὸς λέγεσθαι.

<sup>128</sup> This issue should be linked up with the τί ἐστὶ question, when asked with reference to items from non-substantial categories. See *Top.* I 9.

you would have to say that you are familiar *only* with the inherent quiddity of a thing, not the thing itself:

*Met. Z 6, 1031b18-28*: What being is for a thing (τὸ τί ἦν εἶναι), then, and the thing itself (αὐτὸ ἑκάστων) are one and the same, and not coincidentally so, as is clear from the foregoing arguments. Moreover, seeing that for each thing it holds that to *know* <sup>129</sup> it comes down to just knowing its quiddity, it must follow also by exhibition of cases (κατὰ τὴν ἑκθεσιν) that the two are some one thing. Now as for the thing named after a coincidental mode of being, for instance the educated or the pale, it is not true to say that the thing itself is the same as its quiddity, on account of its double meaning. For that to which the coincidental attribute falls and the attribute itself are both named \*'the pale'.<sup>130</sup> Hence in one way the thing itself and its quiddity are the same, and in another way they are not. For 'pale' is not the same as 'man' or 'pale man', but it is the same as the attribute.

One thing Aristotle is pointing out in this passage is the relationship of material (or extensional or referential) identity (b25-26: "in one way they are the same") which exists between that to which the pale attaches (e.g. Callias) and the particular form 'paleness' inhering in him. This referential identity is based upon the fact that in Aristotle's view, *this* particular paleness, which is a strictly individual form,<sup>131</sup> is found nowhere else but in this person, Callias. Furthermore, he shows their formal diversity in that this particular pale man, Callias, is formally distinct from the particular instantiation of paleness inhering in him. From the viewpoint of modern semantics, speaking of Callias for instance, the referential force of the phrase 'the pale' equals that of 'the pale man'; their descriptive forces expressed by their respective definitions, however, are quite different; for being a pale man is not the same as being pale, as we have seen at the beginning of this section.

<sup>129</sup> Emphasis is laid on 'know' by the particle γέ singling out a special aspect or property (at 1031b20); also Van Raalte (1993), 225; 477.

<sup>130</sup> This sentence unmistakably reveals the need to explain Aristotle's intention in terms of appellation rather than sentence predication, and not (with Ross and Bostock) to make him oddly assert that the quality (attribute) 'pale' is pale. Tricot rightly has "il [i.e. the name 'le blanc'] signifie, en effet, ce dont le blanc est accident et l'accident lui-même". Frege & Patzig have (*ad loc.*) "Denn 'das Weisse' ist einmal das, dem das Weisse zukommt, zum anderen aber auch das, was ihm zukommt". Compare our rejection of 'self-predication' of Platonic Forms.

<sup>131</sup> De Rijk (1980), 31. The final clause makes it clear that the things that are called up after their essential nature also include things from non-substantial categories. Of course, these things are immanent forms, and particular ones, as all Aristotelian forms are. See Frede & Patzig I, 48-57, and my section 9.63.

In his examination of the ontological status of mathematical objects in Book M, Aristotle opposes what we have labelled 'extensional identity' and 'formal diversity' along similar lines. In chapter two the author tries to support his claim that mathematical objects are neither immanent in sensible entities nor beyond the sensible domain. Discussing the status of points, lines, and surfaces, he argues that their logical or formal priority does not entail their priority in subsistence (i.e. privileged beingness: οὐσία):

*Met.* M 2, 1077b1-11: Not everything that is prior in definition (τῷ λόγῳ) is also prior in beingness (τῇ οὐσίᾳ). For those things are prior in beingness which surpass others in the power of independent existence, but things are prior in definition to those the definiens of which is compounded out of their definiens. Now these properties do not <formally> coincide. For if attributes do not exist apart from their substances (παρὰ τὰς οὐσίας), for instance 'mobile' or 'pale', 'pale' is prior in definition [i.e. formally prior] to 'pale man'. But not in subsistence (κατὰ τὴν οὐσίαν) [i.e. extensionally], for it cannot exist separately, but is always along with the concretum; and by the concretum (τὸ σύνολον) I understand the pale man. Hence it is plain that neither is the product of abstraction the prior thing, nor that which is produced by adding determinants the posterior thing. <I am speaking of 'adding a determinant'>,<sup>132</sup> for it is by adding a determinant to 'pale' that we speak of 'the pale man'.

9. 45 *To deny the question of 9.42 leads to an infinite regress*

Returning now to the discussions of *Met.* Z 6, Aristotle (1031b28-1032a4) is going to corroborate his main thesis of the coincidence of quiddity and thing by making clear that to deny that in the case of things named after their essential nature the particular thing itself and its quiddity are one and the same leads to an absurdity. What comes to the fore is that if one imposes a name to each of the quiddities that are supposed by the opponent of the main thesis not to coincide, the procedure will result in an infinite regress. For instance, to the quiddity of horse there will belong a second quiddity

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<sup>132</sup> Ross (II, 415) has well observed that the final clause of this passage (introduced by γάρ) intends to justify the author's explaining the compound phrase 'the pale man' in terms of adding a determinant to a simple notion, a procedure he had discussed earlier (*Met.* Z 5, 1029b30; see my remark thereto, section 9.32). A broad discussion of mathematical abstraction is found in Van Rijen (1989), 157-62, and Cleary (1995), 299-307. For the elliptical use of the conjunction γάρ in phrases where that of which it gives the explanation is omitted, and must be supplied, see Liddell & Scott, s.v. 3.; for Aristotle, Bonitz, *Index*, 146a50-b2, and my *Index* s.v.

'horse';<sup>133</sup> and so on. Now it testifies to a sound *modus operandi* to avoid the very first step that commits you to an infinite regress, so why not say from the start that the main thesis is true? Aristotle asks. His wording helps us to understand his way of thinking on this score:

*Met. Z* 6, 1031b31-1032a4: But even as things are, what prevents some things from being at once<sup>134</sup> the same as their quiddity, given our assumption that quiddity is ousia? Moreover, not only are a thing and its quiddity one, but they have also the same definiens. This is plain also from what has been said. For it is not by coincidence that the quiddity of 'one' and the one are one. Furthermore, if they are different, we shall have an infinite regress. For on the one hand there will be the quiddity of 'one', on the other that which is one; and so the same argument will apply to these too.<sup>135</sup>

The expression in the opening sentence, "some things" (ἐνία), apparently refers to the things named after their essential nature. For these things, the identification of the thing itself and its quiddity obtains, on the assumption — which throughout the entire discussion in *Z* is *in confesso* — that when investigating [*x*], to ask for [*x*]'s ousia boils down to asking for its quiddity. Their sameness, then, is illuminated by pointing to their having the same definiens. If, for instance, you are to make clear what precisely a horse is and what precisely being a horse is, the same definiens will do.

#### 9. 46 *On the sameness of a thing and its particular form*

Finally the upshot of the entire chapter is presented. It appears that, as usual, Aristotle is dealing with particular entities of the outside world, by whatever appellations they in fact are called up, an essential or a coincidental one, or just by their proper names. How these things are named, what appellations are used to talk about them, is of great significance, as will be clear from now on. As to the metaphysical investigation into the true nature of things, it is only whenever they are brought up by appellations after that true nature ('in their own right' or 'in virtue of themselves'), that the metaphysician

<sup>133</sup> Frede & Patzig (*I*, 78; *II*, 102) are right in following the MSS reading ἵππῳ twice.

<sup>134</sup> 'At once' (ἐνθύς) bears on our inferring this without first being hampered by futile deliberations. (Cf. Van Raalte (1993), 252, who refers to Aristotle, *Met.* Γ 2, 1004a5. At *Met.* H 6, 1045a36, this adverb is used to stress the connotative one-ness accompanying any quiddity whatsoever.

<sup>135</sup> This distinction, as well as Parmenidean metaphysics failing to draw it, are extensively discussed in *Phys.* I, 3.



will find what he is after. If, on the other hand, non-essential appellations are used, the investigation will run aground right from the start:

*Met.* Z 6, 1032a4-10: Evidently, then, in the case of primary things named in virtue of themselves, the thing itself and its quiddity are one and the same. Sophistic objections to this position are manifestly solved in the same manner as is the question of whether Socrates and his quiddity are the same. The solutions to them will be successful if presented along the same lines as the questions are raised.

Alexander suggests (*ad loc.*) that the sophistic trickeries about Socrates and his quiddity were of the following kind: If Socrates and being Socrates are different, then Socrates will be different from himself. If they are the same, and Socrates is pale, being Socrates will be the same as being pale Socrates, and a substance the same as its attribute. In fact, objections of this kind have been raised and answered in the foregoing discussions.<sup>136</sup>

These discussions may be summarized as follows. The appellation (name) 'Socrates' used to call up Plato's master is put on a par with essential appellations like '(this) man', 'animal', 'rational' etc. Therefore, Frede and Patzig (II, 102) are wrong in claiming that at 1032a6-10 it is only said that the question "does 'Socrates' equal 'being Socrates'?" can be solved along the same lines as the sophistic problems just dealt with.

On the other hand, they are right in rejecting (*ibid.*, 102-3) Ross's view (II, 179) that, unlike in the Socrates case, Aristotle was discussing *universal* forms in the foregoing lines, and that regarding universals we should agree that they should not be distinguished from essences. In point of fact, however, throughout the chapter Aristotle is discussing particular (or individual) forms *qua* immanent in concreta, not any universal form. As a metaphysician he is always dealing with really existing things (particular things, for that reason). In his view, 'universal things' are merely logical tools that can be useful whenever we want to assert that a certain form is shared by others. The sameness of 'thing itself' and its quiddity — which has nothing mysterious about it, for that matter — is grounded, as we saw before, upon the (extensional or referential) coincidence of the thing-itself with its quiddity, whenever it is designated by an appellation precisely referring to this quiddity, or by its proper name. Throughout the

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<sup>136</sup> This issue has everything to do with Aristotle's view of connotative being included in any noun and adjectival verb. My section 1.64; cf. 9.35.

chapter Aristotle has been emphasizing the requirement that things should be brought up by appellations so as not to merely call them up after some of their coincidental features.

All this, including the semantic role of proper names on this score, can be have more light shed upon it by looking into the way in which Aristotle refines his terminology in the course of the present chapter. Twice the phrase καθ' αὐτό is qualified by the word 'primary' (πρῶτος)<sup>137</sup>, so that the essential appellation involved should refer to the thing's primary quiddity.

What precisely is meant by this refinement is clear from the *Posterior Analytics*. At I 4, 73b32ff. Aristotle explains the pivotal requirement of 'commensurate appellation' with the help of the notion 'primitive appellation'. By 'primitive appellation' he means a thing's designation after the first class to which it essentially (not merely by coincidence, that is) belongs. The man, Callias, for instance, can be called up after his essential nature by appellations like 'animal', 'rational', 'living being', and so on, but only the name 'man' meets the refined condition of calling him after the first class to which he belongs. It is easily understood that the equation 'Callias = his quiddity' should represent the sameness of the concretum with his being this *man*, rather than this *animal*, and so on, despite the extensional coincidence of Callias and this animal. So if it is a metaphysical investigation into the concretum's true nature you are aiming at, you can only grasp it by applying the 'primitive appellation'. If we use the proper name 'Socrates' to refer to him as a concretum qua informed by its form, the soul, he is brought up in his integral proper nature,<sup>138</sup> so that in fact only the proper appellation, 'man' acts as the required 'primitive appellation'.

#### 9. 5 *An intermezzo on the ontological implications of becoming*

The cluster Z 7-9, seems not to have originally been written for the investigation conducted in Z, but, generally speaking, its present position in Z is surely to the point.<sup>139</sup> I will confine myself now to

<sup>137</sup> 1031b13-14: καθ' αὐτὰ καὶ πρῶτα; 1032a5: ἐπὶ τῶν πρώτων καὶ καθ' αὐτὰ λεγομένων. A similar use of πρῶτος is also found elsewhere, e.g. *EN* III 5, 1112b19. Compare the phrase πρῶτος φίλος = 'friend in the strict sense' (*EE* VII 2, 1236b28).

<sup>138</sup> *Met.* Z 10, 1036a16-17; 11, 1037a7-9.

<sup>139</sup> Ross II, 181; Frede & Patzig I, 24f.; Bostock I, 119f. See also my section 11.13.

those passages which are most closely linked up with the metaphysical investigations of Z.<sup>140</sup> In this investigation it is the ontology of natural things in particular that the focus is upon, considered as they are from the perspective of generation and corruption.

### 9. 51 *On the composite of matter and form*

In the opening lines of chapter 7, Aristotle states that things come to be either by nature or by skill or spontaneously. Irrespective of this distinction, they all come to be by the agency of *something*, and out of *something*, and such as to be *something*. And this ‘something’ applies to any kind of appellation (κατηγορία); for they may become a *this*, or a thing somehow quantified or qualified or located (1032a12-15).

As to the natural generation of things, what they come *from* is what we call ‘matter’; what they are brought into being *by* is some natural being, and the something they come to be is a man or a plant and the like, in a word things of which we assert they are substances *par excellence*. They all contain matter; for each one of them is capable both of being and of not being, and this is precisely due to their being enmattered.<sup>141</sup> Both *that from which* and the *model after which* they are produced is nature, since whatever comes into being (e.g. a plant or an animal) has a nature, and so also is that by which they are brought into being. The nature or ‘model after which’ is defined as the specific form common to both the cause and the product; it is called (a24-25) ‘of a similar form’ (ὁμοειδής), and is as such present in numerically different things (a15-26). In the next few lines it is termed the thing’s ‘immediate ousia’.<sup>142</sup>

Leaving aside, for the time being, the other cases of generation (dealt with in 1032a26-b30), the pivotal position of matter is stated by

<sup>140</sup> Owen wrote a *Prolegomenon* on some general issues of Z, 7-9, in Burnyeat (1979), 43-53.

<sup>141</sup> Frede & Patzig (II, 109) are right in suggesting that, unlike in modern usage, Aristotle takes a thing’s matter as its potentiality to be (become) something. In point of fact, one is on the wrong track if one regards Ancient ‘matter’ (ύλη) as some ‘stuff’. The misunderstandings on account of Aristotle’s putative ‘prime matter’ are all due to its being commonly regarded as some mysterious stuff possessing the miraculous capability of becoming everything. See below, my sections 12.37-12.39. Bostock (124), however, thinks it is “difficult to make any sense of the idea that the matter in a thing simply is its capacity both to be and not to be; and presumably what Aristotle intends to say is that the matter *explains* this capacity”.

<sup>142</sup> “By the form I mean a thing’s quiddity and immediate ousia” (1032b1-2). For the meaning of πρώτη οὐσία see 1033a4, and my section 9.67.

referring to the common adage (known later as “Ex nihilo nihil fit”), that it is impossible that anything should come into being if nothing were present beforehand (implying that some pre-existent thing should persist). Matter indeed must pre-exist (1032b30-1033a1).

9. 52 *Should matter be included in the definiens?*

This leads us to the intriguing question whether or not matter should be included in a thing's definiens. The question is not easy to answer. The bronzen<sup>143</sup> circle is defined by saying that the matter is bronze and the form is such-and-such a shape; and it is the *immediate* form, for that matter.<sup>144</sup> Thus the bronzen circle has its matter in its definiens (1033a1-5).<sup>145</sup> However, the pre-existing ‘thing out of which’ cannot always be denoted in this way. So the person who comes to be healthy does so from being sick, rather than from being a man.<sup>146</sup> Hence the healthy person (i.e the recovered one) is designated not as ‘the sick’, but as ‘the man’, to wit ‘the healthy man’. In this case and the like, the pre-existent thing (‘sickness’ etc.) is clearly not an entity which is going to be a constitutive part of the thing to be brought about, and, consequently, should not be adopted in the latter's definiens. But in cases in which the pre-existing situation is a nameless or obscure state of privation — obscure indeed (δῆ), for what precisely is the thing in existence before there exists a bronzen circle or a wooden statue? — the thing appears to come *from* these materials (bronze, iron, stone, wood etc.), in a way similar to how the healthy comes from the sick. This explains why, just as in the former case we do not name the thing after that which it has come from (‘being sick’ or ‘sickness’), so in this case the statue is not called ‘wood’ but ‘wooden’, not ‘bronze’ but ‘bronzen’, and not ‘stone’ but ‘made of stone’. After all (ἐπεὶ),<sup>147</sup> if we were to consider the question closely we would not even say that a statue comes into being *from*

<sup>143</sup> I follow Bostock in making use of the archaic adjective ‘bronzen’.

<sup>144</sup> “And this form (εἶδος) is the first generic entity under which it falls” (1033a4).

<sup>145</sup> This passage is the first in Z to bring up the possibility of a definiens including a thing's material constitution; cf. Z 8, 1033b24-26; also in E, 1, 1025b30-1026a6. See my next section. At 1033a2, Ross follows Bullinger's suggestion to read δῆ instead of δέ. We need no such conjecture, since δέ is at times used with the sense of δῆ. *An.* II 10, 422a9; *ENI* 1, 1094a14; Denniston *s.v.*

<sup>146</sup> Compare what I have termed ‘stratificational semantics’; my *Index s.v.*

<sup>147</sup> For this elliptical use of ἐπεὶ see 1033a20, and my *Index s.v.*

wood, since to come into being implies change of the material, not its permanence (1033a5-22).

The upshot of this chapter seems to be the following. Changeable things always involve a composition of matter and form. So the question arises whether not only the form, but a thing's matter as well, should be part of its quidditative account ('definiens'). In the case of bronzen circles and wooden statues the answer seems to be in the affirmative. However, what precisely is matter in a process of change if the preceding state is a privation? After recovering from a disease, for instance, the 'that from which' of the healthy man in a way may be thought to be sickness, as a privation of health, but on closer inspection, it rather is 'sick *man*'. In this light, it may be argued, to say that wood is 'that from which' the wooden statue has come from is not a satisfactory way of expressing things. We should rather speak of 'wooden' statue.

What Aristotle means to say is that in 'sick man becomes healthy man' the starting-point of the process is not 'sickness' but 'sick man', nor is the result 'health' but 'healthy man' (in spite of the fact that we can say 'sickness turned into health'). Likewise the starting-point of any process of change is a subsistent entity ('man', animal, 'plant') somehow affected, not that affection itself. After all, he says, the material component is itself involved in the process. Therefore to say that any becoming presupposes that there is some pre-existent matter which persists as well, should be questioned.

### 9. 53 *The composite is produced, neither matter nor form by themselves*

The foregoing observations, we may infer, make the role of matter somewhat obscure, so that its being part of the quidditative account or definiens of things involved in change proves to be doubtful.

Small wonder that in the opening lines of the next chapter (8, 1033a24ff.) Aristotle proposes to define the 'that from which' no longer in terms of privation, but of just 'matter' taken as that which comes to be something, namely a sphere, a circle, or whatever else. It is stated now that in the case of a bronzen sphere neither the underlying matter, the bronze, is produced, nor the sphere. The latter statement is immediately qualified by saying that the sphere can be said to be produced coincidentally, because (a) it happens to be a bronzen sphere, and (b) the bronzen sphere *is* a sphere. It is clear, then, that properly speaking, it is not the thing's form that comes

into being; this is actually what comes to be *in* something else. What *is* produced is there being a bronzen sphere. This state of affairs is produced from bronze as its underlying element<sup>148</sup> *and* sphere, by introducing the form into the bronze so that the result is a bronzen sphere (a28-b11).

The form 'sphere' is not produced; otherwise it would itself have to be something made from something else, since what comes into being can always be analysed into the two components, matter and form. It is not that which is addressed as εἶδος or οὐσία (i.e. the subsistent immediate form), but the compound whole that is named after that which comes into being. Clearly in any generated thing matter is present, and one part of the thing is matter, the other form (1033b11-19).

The form is always a particular one, enmattered as it is in a particular instance of its. The assumption of transcendent Forms existing independently of the particular things found in the outside world can never explain, Aristotle insists, these particulars' coming into being. Such universal Forms, if any, would be not a determinate 'this', but a *such-and-such* thing. Rather, from a 'this' a *such-and-such* thing is generated, and when it is generated it is a 'this' of such a kind. The complete 'this', e.g. Callias or Socrates, is like this particular bronzen sphere, while 'man' and 'animal' are like 'bronzen sphere' when taken in general as a logical tool applicable to a plurality of instances (b19-26).<sup>149</sup>

In the final paragraph of this chapter (1033b26-1034a8) Aristotle has shifted his attention from the role of form and matter in generation to the specific role of form as a cause<sup>150</sup> in the process of generation. This gives him the opportunity to show once again that the Platonic Forms are useless doubles. He agrees that the generating

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<sup>148</sup> When using the phrase ἐκ τοῦ ὅλως ὑποκειμένου Aristotle indicates that it does not matter which lump of bronze is being used for fabricating the sphere. See Frede & Patzig II, 132, and 281 (re 1039b22). For Aristotle's use of ὅλως and ἀπλῶς see my *Index s.vv.*

<sup>149</sup> Again, a definiens including a thing's material constitution is in order.

<sup>150</sup> The phrase ἡ τῶν εἰδῶν αἰτία (1033b26) seems to stand for 'the causality found in the forms', and τῶν εἰδῶν should thus be viewed as a *genitivus appositivus*, such as in the Homeric (e.g. *Iliad* XXII, 60; cf. Plato, *Rep.* I, 328E9) ἐπὶ γήραος οὐδῶ = 'on the threshold of old age', where 'threshold' stands for 'old age', and is taken for the borderline between life and death. A similar use is found in Herodotus II, 139; Euripides, *Medea*, 153; and at *Met.* Z 14, 1039b9-14, where the argument plays on the notion of 'ousia of animal' meaning not the ousia possessed by an animal, but the ousia 'animality'; Frede & Patzig II, 274f. For this genitive see Kühner-Gerth I, 265.

entities are such as the things generated (not numerically the same, but formally, he explains), for man begets man, as is true of natural things generally. We need not postulate the existence of separate Forms, since it suffices that the begetter itself is the producer, and causes the form to be in the matter. Now the complete result, e.g. such a form, namely manhood, being enmattered in *this* flesh and *these* bones, is Callias or Socrates. And they are something different from their generator by their matter, because their parcels of matter are different from his. But they are the same as he is specifically; for the form (species) is indivisible.

This passage (1034a5-8) also contains some controversial material. The claim that “what makes Socrates and Callias different is their different matter, while they are the same in form, since their form is indivisible” is commonly taken as a straightforward proof that for Aristotle, matter is *the* principle of individuation. Bostock (134) even speaks of “Aristotle’s standard view” and refers to some other passages in the *Metaphysics*.<sup>151</sup> However, Aristotle’s statement should be understood in terms of the present context (1033b26-1034a6). What he is trying to make clear is that whenever the causality of forms is under examination, one should be aware that it is enmattered forms — not transcendent Platonic Forms — that are involved in the generation of substances like men and other natural things. Evidently we do not need such Platonic Forms as paradigms, and it is sufficient that the concrete begetter is the producer, and thus is the cause of the form as enmattered. Therefore Socrates and Callias are instances of “such a kind of form in *this* flesh and *these* bones”. It is their determinate flesh and bones which makes them different. But matter itself is repeatedly reported by Aristotle to be indeterminate, so that when he speaks of the causality concerning the generation of new particulars, including their being differentiated as individuals, he has enmattered forms, not just matter, in mind; my section 10.72.

The main purport of chapter 8 is to make clear that form does not come to be any more than matter does, but only the composite of these two indispensable components of any natural thing. In passing it is shown that the Platonic Forms can have no role whatsoever in explaining natural generation.

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<sup>151</sup> *Met.* Δ 6, 1016b31-35; I 3, 1054a32-35; A 8, 1074a31-35.

9. 54 *The summary of Z, chs. 7-9 found in Z 9*

The first two paragraphs of chapter 9 discuss spontaneous generation and generation by skill; and in that context there are also some remarks about natural generation (1034a9-b7). Then a kind of summary of chs. 7-9 is given, which in fact mainly focusses on what has been said in chapter 8. Only this summary concerns us now.

In the summary Aristotle argues again for the thesis that form is not generated, this time by emphasizing that this holds of any form, including those from the non-substantial categories:

*Met. Z 9, 1034b7-16:* But not only regarding subsistent entity (οὐσία) does our argument make clear that its form does not come to be, but the argument applies to all the first-named [or 'immediate'] entities alike, such as a quantity, or quality, or any appellation from the other categories. Just as it is the bronzen sphere that is generated, not the sphere nor the bronze — and likewise in the case of <the material> bronze, if it is generated, its form and matter are not generated; for they must always pre-exist — so it is also true in the case of the quiddity of<sup>152</sup> the quality, and quantity, and similarly the other categorial properties. For it is not the quality that is generated, but wood of that quality; and not the quantity, but the wood or the animal of that size.

So it is clearly stated that what has been said earlier about the existence of non-substantial quiddities also holds of their coming into existence. None the less, there is also a difference between substantial and non-substantial categories on this score. It is peculiar to subsistent entity (ἴδιον τῆς οὐσίας) that for its generation there must exist beforehand an actual subsistent entity, which produces it — an animal, for instance, if an animal is produced. For the reproduction of a quality or quantity, however, it is not necessary that it should exist beforehand otherwise than potentially (b16-19).

9. 6 *How to overcome some problems of definition*

Chapters Z 10-12, deal with two main problems resulting from the fact that any account (including the definiens) describing a concrete whole (referred to as πρᾶγμα or 'thing including its appurtenances') is necessarily composed of parts. One is, whether the account of a

<sup>152</sup> Deleting the second ἐπὶ at 1034b13, where Frede & Patzig (164) delete the whole phrase καὶ ἐπὶ τοῦ τί ἐστι.



whole should contain the accounts of its parts, the other, what precisely constitutes the unity of an object as defined.

9. 61 *The 'thing itself = quiddity' thesis discussed from another angle*

The first question, which is dealt with in chs. 10-11, discusses the 'thing = quiddity' thesis from another angle. On the assumption that 'thing-itself' = its quiddity as was explained in Z 6; and given the fact that any concretum of the outside world contains matter (ύλη) as its part,<sup>153</sup> the questions arise whether (1) the definiens of a whole should contain those of its parts (including matter), and (2) the parts are prior to the whole; if so, the unity of the definiens, and consequently the quiddity, must be jeopardized.

An extensive discussion of chs. 10-11 is found in Cleary (1995, 441-55), who approaches these chapters from the angle of Aristotle's mathematical views. There is one important point on which I cannot go the whole way with Cleary. In this discussion, as well as throughout his important study on Aristotle's view of mathematics, Cleary seems to overstate the distinction between the diverse objects of the different theoretical disciplines by looking on these objects as if they existed alongside each other in the outside things, irrespective, that is, of their being *observed* differently by the natural philosopher, the mathematician, or the metaphysician.<sup>154</sup>

In point of fact, however, the objects of, say, the mathematician's discipline have an existence independent of any mathematical approach in the material sense only, i.e. as various sensibles of the outside world, say, bronzen spheres, figurative entities like tympanons, square objects of art, and so on and so forth. But formally, i.e. in their being the proper objects of the mathematician, they are entirely dependent on a special way of conceiving them, which is described by Aristotle in terms of substraction (ἀφαίρεσις), and,

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<sup>153</sup> Including circles, spheres etc., which are addressed as enmattered mathematical entities, made as they are of bronze, wood or stone (*Met.* Z 11, 1036a32). Of course the mathematician is only concerned with the circle *in abstracto* ('without qualification'), paying no attention to its being in fact always enmattered. (cf. 1035b1-3 and 1036a1-5, and 32). For ἀπλῶς ('without qualification') referring to the form taken universally see my section 1.3.

<sup>154</sup> Annas rightly remarks (1976, 148, to *Met.* M 3, 1077b17-1078a9) that to Aristotle, "the distinctive nature of mathematical truth cannot be based on what is distinctive about its subject-matter, but must lie rather *in its way of treating* (italics mine) a subject-matter which it may share with other disciplines".

when it comes to comparing them to the proper objects of the other disciplines, by addition (πρόσθεσις).

Cleary (1995, 94) objects against Guthrie<sup>155</sup> that his translation is misleading in so far as it suggests that the distinction between the different proper objects is made in terms of differences between the respective *methods* of the disciplines, which, Cleary takes it, conflicts with Aristotle's standard practice of distinguishing disciplines from one another in terms of their characteristic objects. Cleary's objection, however, is beside the point. No doubt, to Aristotle the outside things do possess all sorts of real properties by themselves, including the ones *we* take to be characteristic of them. But whether a certain property of something is to be reckoned as a (real) characteristic of that thing still depends on our decision to regard it as such. Thus the mathematician does recognize a thing's, say, a bronzen sphere's, being enmattered. Unlike the natural philosopher, however, he does not consider the embodiment characteristic; for although they examine the same material thing, what the mathematician focusses on is precisely its being a mathematical figure. Thus Guthrie is quite right: the distinction between the disciplines' proper objects is entirely dependent on our applying different angles of approach ('focalizations') and methods corresponding to them. As a matter of fact, this approach is alone in keeping with Aristotle's standard practice of rigorously precluding any Platonic idea of mathematical objects existing as such in reality, independent of human thought.<sup>156</sup>

Turning now to *Met. Z*, ch. 10, in this chapter — which is aporetic, to an unusual extent indeed — Aristotle argues that if we confine ourselves to the parts of which a subsistent entity is composed, viz. form and matter, "each thing may be said <in its own right> to be its form, or rather the thing qua having the form; but it cannot be said to be in its own right the material part" (1035a7-9). After some discussion Aristotle arrives at an interim conclusion:

*Met. Z* 10, 1035a25-b3: Things which are both matter and form taken together, for instance, a snub or a bronzen circle, have matter as a part and disintegrate into their parts. Things, however, which are not taken together with their matter but without it, i.e. things whose account is an account of the form alone, do not disintegrate at all, or

<sup>155</sup> Guthrie (1939), to *Cael.* III 1, 299a14-18.

<sup>156</sup> On Cleary's view of the matter, the various disciplines cannot acknowledge each other's objects as legitimate. Incidentally, Cleary's misunderstanding is surely to do with his oddly taking (94) such logical entities as predicates for "real things that belong to real subjects"; cf. *ibid.*, 96, n. 37, quoted below, my note 178.

at any rate not in this way. So material constituents are both parts and principles of the matter, but they are neither parts nor principles of the form. And this is why a clay statue disintegrates into clay, or a bronzen sphere into bronze, or Callias into flesh and bones. And even a circle into its segments; <and this is not that surprising>,<sup>157</sup> for there is one sort of circle which is taken together with matter, since the same name is used both for what is without qualification (ὁπλῶς)<sup>158</sup> a circle and for particular circles, owing to the fact that there is no name peculiar to the particular ones.

Next, the same question is taken up again, this time in terms of priority and posteriority. First a rule of thumb is stated (1035b11-14): “Those parts that are material, and into which the thing is resolved as its matter, are posterior; but those that are parts of the definiens, i.e. the ousia as expressed by the definiens, are prior, some or all of them”. The parts of the soul, then, will be prior to the animal taken as a compounded whole (τοῦ συνόλου ζῶου), and this holds good for each particular animal, whereas the body and its parts will be posterior to the subsistent being (τῆς οὐσίας); and it is not this substance but the compounded whole that is divided into these bodily parts as its matter. Some qualifications are made concerning the diverse bodily parts, such as the heart and the brain (1035b14-27).

#### 9. 62 *On the mental status of ‘universal forms’*

A brief paragraph follows in which it is claimed that things are different, as far as the definientia of particulars of the man and horse type are concerned. Bostock (155) has well observed that its content is not closely attached either to what precedes it or to what follows it, and he may be right in regarding it as a later addition. In fact, in a way it anticipates the discussions of ch. 13, that nothing universal can be ousia:<sup>159</sup>

*Met. Z* 10, 1035b27-31: But ‘man’ or ‘horse’, i.e. any appellation that in this way refers to particulars, but in a universal sense, is no ousia but a compound whole of a sort (σύνολόν τι), namely a combination of such-and-such definiens and a corresponding matter, but <both of them> taken universally.<sup>160</sup> But in a particular case, <the ousia> Socra-

<sup>157</sup> For the elliptical use of the subsequent γάρ (‘for’) see my *Index*, s.v.

<sup>158</sup> The adverb as usual makes the common name refer to the the circle taken universally, i.e. the material significate ‘circle’.

<sup>159</sup> Frede & Patzig (II, 189-91), where the usual misunderstandings of the passage (that it should be taken as dealing with the issue of individuation) are convincingly countered. See also my section 10.72.

<sup>160</sup> For this σύνολόν τι taken as ‘significatum totale’ (= the abstract concept

tes, <for instance>, is one compounded immediately from a particular parcel of ultimate matter;<sup>161</sup> and likewise for the others.

Thus this paragraph does little more than to oppose the two senses of οὐσία, to wit, this term taken as the quiddity (of e.g. man) to ousia taken as *this* or *that* particular human being. However, in this passage 'quiddity' is not taken, as it was before, ontologically to stand for the particular form which is immanent in each particular, but as its logical counterpart merely existing in the mind.

### 9. 63 *On the particular status of the immanent form*

Returning now to the initial problem, whether the definiens of the whole should contain those of its parts, it is stated that while there are parts of the form as well as of the concretum,<sup>162</sup> only the former are parts of the definiens. This statement, quite obvious in itself, is now explained in terms of the foregoing discussion:

*Met. Z* 10, 1035b31-1036a12: Now there are parts both of the form — by 'form' I mean the quiddity — and of the whole combined out of the form and its<sup>163</sup> matter. But only the parts of the form are parts of the definiens, but the definiens has universal bearing; for 'being a circle' is the same as 'circle', and 'being a soul' the same as 'soul'. But there is no definiens of what is already a compounded whole, for instance of this particular circle, or of any other perceptible or intelligible particular. By intelligible circles I mean e.g. the mathematical circles, and by perceptible ones, those made of bronze or wood. These are apprehended by thought or by perception, and when they have passed out of the <cognitional> actualization it is not clear whether or not they are at any time<sup>164</sup> in existence. Anyway they are

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apprehending a thing including its being materially conditioned) cf. *Z* 11, 1037a6-7, where also the composite of form and matter is taken universally; see Frede & Patzig II, 183; 192-3, and my section 9.64.

<sup>161</sup> Bostock (55) is right in rejecting any suggestion that 'prime matter' is referred to.

<sup>162</sup> Bonitz inserted καὶ τῆς ὕλης at 1035b33. The insertion was suggested to him by the use of the pronoun αὐτῆς after the preceding ὕλης. He was followed by the editors and most commentators. Frede & Patzig (193f.) are quite right in cancelling Bonitz's conjecture. Surprisingly, Bostock comments upon b31-3 that we hear for the first (and last) time of *three* (*his italics*) kinds of parts, the parts of the form, of the compound, and of the matter, but he does not follow Frede & Patzig and continues to regard Bonitz's conjecture as an emendation. I would like to emend the MSS reading a little bit; see the next note.

<sup>163</sup> Reading αὐτοῦ instead of αὐτῆς and rejecting Bonitz's insertion of καὶ τῆς ὕλης.

<sup>164</sup> Reading (with Frede & Patzig: "ob [...] überhaupt") πότερὸν ποτε, following our two oldest MSS (Parisinus and Vindobonensis), and the one used by William of Moerbeke. The same thought is expressed at *Met. B* 5, 1002a32-35.

always apprehended and spoken of by means of the universally applicable definiens. But their matter is in itself unknowable. Some matter indeed is sensible, e.g. bronze, wood, and all changeable matter, while some is intelligible, namely that which is present in sensible things but not in so far as they are sensible, such as the matter of mathematical objects.

This is one of the key passages dealing with the ontological status of the immanent forms,<sup>165</sup> including the mathematical forms. The latter are all particular forms immanent in their own particular instances. At the same time, they can be abstracted from their particulars to have a universal status, still not existing by themselves, but only in the mind of the mathematician, so that once they are no longer actually conceived of, Aristotle remarks, it is an open question whether they at any time will be in existence again.<sup>166</sup>

Ross is of the opinion that “the main importance of the present chapter lies in the recognition of (1) the intelligible individual, and (2) the materiate universal or λόγος ἔνυλος (*An.* 403a25), as intermediates between the sensible individual and the pure form or as we may call it, λόγος ἄνυλος”. In his comments upon 1035a20, he claims (II, 197f.) that evidently Aristotle’s ‘intelligible individuals’ answer to Plato’s “intermediates existing distinct from the Forms and the sensible things” (τὰ μετὰξύ; cf. *Met.* A 6, 987b14), which Aristotle so eagerly attacks elsewhere, without hinting that he himself held a similar doctrine.<sup>167</sup> Frede and Patzig (II, 177; cfr. 183; 195f.) rightly reject the suggested equation (which has led Ross to the recognition of five entities, as far as the mathematical entity of sphere is concerned), and come to a more economic picture of entities:

- (a) the form of the (bronzen) sphere (spherical form);
- (b) the concrete (bronzen) sphere;
- (c) the concrete mathematical sphere, which does not exist independently of the sensible sphere, and thus, in fact, is this particular form enmattered in this concrete particular.

Aristotle’s ontology definitely has no room for any (Platonic) ontological status mediating between the (real) particular and the (logical) universal status. Moreover, Ross’s ‘materiate universal’ baptized

<sup>165</sup> This pivotal tenet of Aristotle’s ontology will be given more attention in my section 10.71.

<sup>166</sup> Compare Aristotle’s remark at *APr.* I 41, 49b36-37, that the mathematician does not use the diagrams in the sense that he reasons from them (my section 6.24).

<sup>167</sup> *Met.* A 9, 991b29-31; B 2, 997b14-24; K 1, 1059b6-16; M 2, 1077a1-3; N 3, 1090b32-1091a12.

by him λόγος ἔνυλος is a hybrid creation, which could only come into existence owing to Ross's confused conception of 'universal', which, for that matter, is at the basis of all modern talk of Aristotle's (supposedly) 'universal' forms. Incidentally, the phrase λόγος ἔνυλος is a hapax in Aristotle, and is used in *An.* I 1, 403a25, to describe the affections of the soul as 'materialized or embodied cogitations'.<sup>168</sup>

At 1036a9-11, Aristotle distinguishes intelligible matter (ὑλη νοητή) from sensible matter (ὑλη αἰσθητή). The former phrase, with which the phrase 'the matter of mathematical objects' (ἡ τῶν μαθηματικῶν ὑλη found at *Met.* K 1, 1059b15) is likely to have some connection, occurs in Aristotle only three times (also in Z 11, 1037a4, and H 6, 1045a34-36). Ross (II, 199f.) is right in thinking it likely that Aristotle should have used it in similar senses. In his comments on the passage in K, Alexander identifies<sup>169</sup> this matter with extension.<sup>170</sup> In the two passages of Z, this interpretation is certainly appropriate, because there the mathematical objects' general condition of 'having extension' (or 'extensionality') is examined. *Prima facie* it has a different sense at H 6, 1045a34-36, since in that context it is, in principle, not limited to mathematical objects, although the notion is illustrated by a mathematical instance, calling 'plane figure' the intelligible matter of the circle. We will see presently (9.64) that there are good reasons to take the phrase to apply to *anything's* general condition of 'materiality' ('material constitution'). For mathematical entities this condition boils down to extensionality, while for material (natural) things, it includes their being individualized in this or that tangible matter.<sup>171</sup> Thus, on Aristotle's view, the intelligible matter, which is the geometer's object of study, is nothing but the sensible matter of the mathematical things materialized in bronze, in stone or in other materials, or drawn in the sand, but conceived of in abstraction from their sensible condition.<sup>172</sup>

<sup>168</sup> The entire passage *An.* I 1, 403a3-24, 403b25, offers a nice illustration of Aristotle's view of enmattered forms, and at the same time of the way we can logically distinguish between forms by themselves and these same forms as enmattered. At 403a10-16 Aristotle's example of the tangent shows that to him, although it is the straight line qua straight which touches a bronzen sphere at a point, there is only talk of material constitution, rather than the particular materiality of this or that sphere.

<sup>169</sup> CAG I, 510<sup>3</sup>; 514<sup>27</sup>.

<sup>170</sup> The interesting issue of matter = extension is dealt with thoroughly in De Haas (1997), *passim*, and 1997a.

<sup>171</sup> We need not (with Ross II, 200) take Aristotle to have generalized the notion in Z when he came to write H.

<sup>172</sup> Cf. Bostock, 157.

In *De memoria* we find a nice illustration of the issue of ‘material constitution’ as conceived of by abstraction from individual matter. In the opening lines of that work Aristotle deals with the role of φαντασία (‘sensitive presentation’) in intellectual activity, and compares it to what happens in geometrical demonstration. Generally speaking, he takes φαντασία to be the indispensable intermediary between sense perception and thought, bridging the gap between these two:

*Mem.* I 1, 449b31-450a7: Without presentation (φαντάσματος) intellectual activity (‘thinking’, νοεῖν) is impossible.<sup>173</sup> For, as it happens, there is in intellectual activity an affection identical (ὅπερ) with the one occurring in geometrical constructions (ἐν τῷ διαγράφειν). For in the latter case, though we do not for the purpose of the proof make any use of the fact that the quantity in the triangle is determinate, we none the less draw it determinate in quantity. So likewise acts whoever is thinking: even though one does not think the object as of a quantitative nature, none the less one visualizes it as quantitative, notwithstanding still that one does not think it qua quantitative; and if the object by nature belongs to the domain of quantitative things, albeit indeterminate, one envisages it as a determinate quantity, though one thinks it as just a quantum.<sup>174</sup>

The chapter winds up (1036a12-25) with a summary of the foregoing answers to the leading question of this chapter — how matters stand with regard to the whole and its parts, and their relationships of priority and posteriority. The summary envisages almost all the rather complicated ins and outs found in these answers.

#### 9. 64 *Again, should matter be included in the definiens?*

Chapter 11 clearly divides into two different sections.<sup>175</sup> In the first one (1036a26-1037a10) the discussion of the previous chapter is continued and rounded up. So it starts by examining what sort of parts are parts of the form, and what sort only fall to the concrete whole. This discussion once more leads us to the question whether or

<sup>173</sup> Cf. *An.* III 9, 432a15ff.; *Mem.* I, 449b31-450a1 and a 12-13. Elsewhere φαντασία is considered a kind of νόησις, e.g. *An.* III 10, 433a10.

<sup>174</sup> In *An.* III 7, 431b12-17, it is argued that φαντάσματα (unlike αἰσθήματα) do not include particular matter, but are representative of the object’s material constitution; cf. III 8, 432a9-10. The idea of material constitution is surely something to do with Aristotle’s (and indeed the Ancients’) instinctive dislike of the entirely indeterminate: our thinking is always oriented to what is in a way determinate, but no particular determinateness is required. See *Mem.* I, 449b31-450a6.

<sup>175</sup> Frede & Patzig II, 199.

not matter (qua component of the compounded whole, that is) should be included in a thing's proper definiens. The right answer to this question is pivotal to correctly defining a particular's nature, because you might mistake material elements for formal ones and thus, by adopting them in your definition, adulterate the definiens:

*Met. Z 11, 1036a26-31*: The question naturally comes up what sort of parts are parts of the form, and what sorts, not of the form but of the whole taken together.<sup>176</sup> Yet as long as this is not plain it is not possible to define any thing; for definition is of the universal and, accordingly,<sup>177</sup> the form. If then it is not evident what sort of parts are material, and what are not, the definiens of the object will not be evident either.

The phrase τοῦ καθόλου καὶ τοῦ εἴδους (1036a28-29) must not lead us to believe, as they actually do most modern commentators,<sup>178</sup> that Aristotle is speaking of 'universal forms' inhering in particulars. What he means to say is that when it comes to the logical process of defining an outside particular, you have to focus on what is *logically* applicable to a plurality of things, namely the particular's form. Not this form qua inhering in precisely this individual, say, Socrates, is meant because in that capacity it belongs solely to him and is, accordingly, not common to other particulars; it is actually the form qua abstracted from the particular, the form, that is, which by this logical operation has been made universally applicable to other, kindred particulars.

The application of forms in this way is just a matter of conceiving the particular instantiations. The fact that they are universally applicable in no way means that in Aristotle's view, there should really exist such odd things as 'materiate universals'. In fact, the distinction drawn by Aristotle at 1035b27-31 is not between three different

<sup>176</sup> Frede & Patzig (*ad loc.*): "dessen bei dem die Materie miteinbezogen ist". Cf. E 1, 1025b32; Z 10, 1035a23-5.

<sup>177</sup> Pace Cleary (1995, 449, n. 69), it is not "unclear here whether the καί (at a28) is epexegetic or disjunctive".

<sup>178</sup> Including Cleary (448f.), it seems, who thinks that "the evidence that Aristotle did accept such 'materiate universals' (Ross) or 'universal concretes' (Chen) in his ontology seems undeniable, since he clearly distinguishes (1035b27-31) them from the pure form and the concrete particular"; cf. his remark (96, n. 37) that "It is quite clear from Aristotle's *Categories* that predicates (sic!) are things and so their logical implications have physical ramifications". In fact, the aforesaid distinctions bear on Aristotle's logic and epistemology, not his ontology. By the way, by his excessively pressing what he (quite rightly, for that matter) considers (1995, *Introd.*, p. XXVIII) "the typical Greek assumption about the correspondence of knowledge with its object", Cleary tends to make Aristotle a naïve realist.



'things' (the 'universal', the 'pure form', and the concrete particular), all of them inhabitants of his ontology: it is only concerned with the two different ways in which forms may inhere in a concrete particular, one admitting of a definition of the concretum without its material constitution, i.e. the form *conceived of* (not, existing) as pure form, the other bound to include the concretum's material constitution. This is all a matter of focalization and conceptualization, not ontology. As will be argued for later, Aristotle's semantics knows of the difference between what is later contrasted as 'significatum formale' and 'significatum materiale', being the products of 'formal abstraction' and 'total abstraction', respectively.<sup>179</sup>

The gist of the problem is elucidated by some examples (1036a31-b20). There are cases indeed in which a form is always embodied in the same materials (e.g. man in flesh, bones, and nerves), which could make us erroneously think they are real parts of the form. But the wrong view may also be the other way round, in that one mistakes a formal element for a material one, as is e.g. done by people (whether Platonists or not; presumably Platonists of a Pythagorean bent) who reduce the quiddity of a line to that of 'number' or 'two-ness', meaning that 'having-lines' and 'continuity' are, so to speak, a line's material condition, which is to be informed by the form 'two-ness' (to be taken as 'two-dimensionality?'). While the mathematical issue just mentioned is situated in Platonic (and Pythagorean?) circles, the question about the status of the form 'manhood' seems to catch Aristotle's personal interest. At 1036b3-7, the fact that the form 'manhood' is always found in flesh and bone and the like makes the author wonder whether these materials are parts of the form and, accordingly, should be parts of the definiens. He suggests that they are instead the sort of matter that we cannot separate from the form only because of the empirical fact that it never supervenes on any other material:

*Met. Z* 11, 1036a31-b7: Whatever can be seen to occur in specifically different materials, as a circle may exist in bronze or in stone or in wood, it seems plain that the bronze and the stone are no part of the circle's quiddity, since it may be found separated from them. Of things that are *not* seen as separated <from one kind of material> there is no reason why the same may not be true, just as if all circles were seen to be of bronze; for none the less the bronze would be no

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<sup>179</sup> That there are no such odd entities as 'universal forms' in Aristotle's ontology is convincingly argued for by Frede & Patzig. This important item will be extensively discussed in my sections 10.71-10.73 and 10.81-10.84.

part of their form; but it is hard to abstract it in thought. I mean the form of man is found always in flesh and bones and parts of this sort; are these then also parts of the form and the definiens? Or are they rather matter, and is it because man is not found in other matters too that we are unable to perform the abstraction?

There is some discussion about what Aristotle has in mind in this passage.<sup>180</sup> Some interpreters take Aristotle to (implicitly) rule out the possibility that any matter is included in the proper definition of material things. The confusion concerning this enigmatic passage is best illustrated by Bostock's comments upon it:

"Some interpreters have taken the last sentence of this paragraph to be stating that flesh and bone are not parts of the form (e.g. Balme [1980], 294; Lear [1988], 283; Gill [1989], 132; Frede & Patzig). This, however, reads too much into it, for it is simply phrased as a question which permits either answer. Nevertheless, we can be fairly sure that this was Aristotle's view, for at 36<sup>b</sup>10-12 in the next paragraph he apparently accepts that flesh and bones stand to a man as bronze and wood to a statue (Heinmann [1979], 260-1). (But perhaps we ought not to be *quite* sure, for 36<sup>b</sup>10-12 is after all presented as part of an opponent's line of thought). Unfortunately, we need not take notice of such hints as these, for when Aristotle comes to offer his own view explicitly, at 36<sup>b</sup>21-32, what he says is extremely enigmatic" (160).

Frede & Patzig are of the opinion (200f.) that Aristotle definitely does not allow definitions to include a thing's matter, and they explain our passage by saying that Aristotle only means to make clear that sometimes (as in the case of man) the thing, i.e. its form, should be defined in such a manner as to show that the form in question only occurs in some special kind of material (such as flesh and bones). They interpret 1036b5 in light of 1036b21-30. Let me quote this passage first:

*Ibid.* 11, 1036b21-30: We have pointed out, then, that the question of definitions contains some problem, and why this is so. Therefore, to try to (definitorially) reduce all things to their forms, eliminating their matter is useless labour; for some things surely are a particular form in a particular matter, or particulars in a particular condition. And the comparison that Socrates the Younger used to make in the case of animal [viz. between an animal and a circle] is not sound; for

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<sup>180</sup> Ross *ad loc.*; also Bostock *ad loc.*, who refers to many other interpreters. Burnyeat describes (I *ad loc.*) this discussion as "a slippery slope argument inspired by the thought that definition is of the form". Aristotle shows, he continues, "that if you press that idea too far there will be no stopping short of the absurd conclusions of 1036b17-20". Anyhow, this putative "slippery slope argument" does make clear enough that you have to mark off two kinds of definiens, and to my mind, *that* is what counts.

it leads away from the truth, and makes one suppose that man can possibly exist without the (usual) parts, as the circle can without bronze. But the case is not similar. For an animal is something sensitive, and cannot be defined without reference to the power of moving itself,<sup>181</sup> nor, therefore, without reference to the condition of its parts.

Frede & Patzig (II, 203-5; cfr. 209f.) are surely right in referring to this paragraph in order to understand what is said at 1036b5. However, their claim that Aristotle categorically rejects the possibility of framing a definition of material things which includes their matter, cannot be substantiated by the passage quoted. An obvious objection to their stance is that it is difficult to see how in the case of certain material things, you can make clear in defining their form that it *always* inheres in a special matter, without implying (as Frede & Patzig think we should not) that matter is included in their definiens. It is true the problem still remains that, at least at first glance, matter's inclusion in the definiens seems to imply that matter should be part of the form (εἶδος), which would be very awkward indeed. However, this first glance is deceptive. As will be argued for presently, this problem can be solved by assuming that Aristotle allows for two kinds of definiens, one signifying the thing's quiddity or form (thus presenting a 'formal significate'), while the other indicates this quiddity together with, not its matter, but its material constitution taken generally, or, say, its 'condition of materiality'.<sup>182</sup>

This distinction is most clearly suggested where Aristotle insists that some non-sensible things can have matter included in their being, whenever they are individual things rather than forms by themselves. For this reason, the semicircles taken as parts of intelligible matter will surely be part of the particular circles, rather than of the circle taken in its universal applicability:

*Ibid.* 11, 1037a1-5: Indeed, there will be matter of some sort (ὅλη τις ἔστιν) in everything which is not the quiddity and form taken by itself (ὃ μὴ ἔστι τί ἦν εἶναι καὶ εἶδος αὐτὸ καθ' αὐτό), but a 'this' (τόδε τι). Accordingly, the semicircles will be parts, not of the circle taken in its universality (τοῦ καθόλου), but of particular circles, as we said before [1035a30-b3]. For matter may be either sensible or intelligible.

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<sup>181</sup> Frede & Patzig are right in reading αἰσθητικόν instead of αἰσθητόν found in the manuscript tradition; cf. Bostock (164). For the association of sensitivity and locomotion see *An.* I 1, 403a6-10; 2, 403b26-27; II 2, 413b11-14; 3, 414a30-32 and 415a1-7; III 3, 427a17-19.

<sup>182</sup> Similarly at *An.* I 3, 407b14-26, Aristotle blames his predecessors for failing to recognize the intimate link between soul and body.

The last sentence does not distinguish between two kinds of matter existing side by side, but merely between two different ways in which the matter of outside things may be conceived of. The distinction between matter and material constitution is on the same footing.<sup>183</sup>

The first section concludes with some more details about the case of particular human beings, like Socrates and Coriscus, when they are called up by their proper names:

*Ibid.* 11, 1037a5-10: It is also clear that the soul is the immediate<sup>184</sup> ousia, that the body is matter, and that 'man' or 'beast' are the compound of the two taken universally.<sup>185</sup> But in the case of Socrates — and the same holds for Coriscus — the appellation is twofold if it also refers to his soul, since some people take this name to stand for his soul, others for the compound whole. But if it simply stands for this particular soul and this particular body, then the particular corresponds to the universal.

Whenever particular things composed of form and matter are designated by means of the proper name, this name, e.g. Socrates, can

<sup>183</sup> Cleary (1995, 454) thinks it noteworthy about this entire passage that it seems to admit "a class of intelligible particulars between sensible circles and the universal, which are somehow individuated by their relationship to intelligible matter". Along with having no solid textual foundation, this interpretation is at odds with Aristotle's radical dislike for any Platonic reminiscence on this score. And the same applies to his surmise that "perhaps these [sc. intelligible particulars] are pale ghosts of the old Platonic Intermediates, which are still required in some form by the mathematical practice of constructing particular figures to prove that they have definite relationships to each other". As will appear when we examine an observation made by Aristotle near the end of this chapter (1037a10-17), Aristotle does not regard mathematical objects as a sort of intermediate entity.

<sup>184</sup> The Greek has πρώτη οὐσία, which is commonly rendered 'primary substance' ('primäre Substanz', 'substance première', 'sostanza prima'). Of course, not — as is *in confesso* — the 'primary substance' of the *Categorias* is intended here (which is first in the order of existence), but rather the comprehensive, unanalysed form, which is *immediate*, i.e. the first in the order of logico-semantic analysis, e.g. in the case of human beings, 'manhood', and not the secondary or mediate forms 'animality', 'rationality' etc. For this notion, which is also found at 1032b2, 1037a28; b1-3, and 1038b10, see my *Index*, s.v. In Z 12, the word is used in the same sense in the phrase πρώτον γένος = 'immediate genus', or 'first-named genus'. In Z 9, 1034a25-26 τὸ αἴτιον πρώτον καθ' αὐτό stands for the immediate cause, which is precisely (or 'in its own right') the cause. (For the idea of 'immediate cause' see *Mel.* H 4, 1044b1-2 and 15-20). At *EE* VII 2, 1236b28 and 5, 1239b6, the phrase is used in the sense of 'friend in the strict sense of the word'.

<sup>185</sup> This seems to be the first occurrence in the *Metaphysics* of what in Medieval Aristotelianism will be called 'significatum materiale or totale', i.e. the form taken as universally assignable, including material constitution. E.g. the form 'homo', taken universally, but including its being somehow enmattered ('material constitution'), irrespective of its inherence in *this or that* flesh, *these or those* bones and so on. Just as the product of formal abstraction is the form *in abstracto*, so total abstraction results in the whole 'man' including its material constitution, but still in abstraction from *this or that* particular matter.

bring up its referent in a twofold manner. On the one hand, it may refer to his soul as that which informs this special parcel of matter and is, accordingly, representative of the compound entity, Socrates; on the other, it may immediately refer to this concretum. And this holds good *universally*, not only for Socrates, that is, but also for Coriscus and other human (and animal) beings. The statement that 'man = soul *plus* body' obtains universally. Now it is the same as far as each particular itself is concerned. As in the universal case, here too it holds good that the phrase 'this man, Socrates' equals 'this soul *plus* this body, Socrates'. No doubt, the universal case is nothing other than the particular compound, composed of the particular form and the particular body, but now taken as common and logically applicable to all (possible) members of the class of human beings. Thus these universals only exist in the mind, abstracted as they are each time (and only existing as long as they are being abstracted)<sup>186</sup> from the really existing particular compounds of particular forms and particular matter.<sup>187</sup>

#### 9. 65 *The status of 'non-sensible' objects like 'mathematicals'*

In the second section of this chapter (1037a10-b7) Aristotle prefaces (a10-20) a survey of (part of) the foregoing discussions with two questions, which he will go into later on. The first question is twofold, (a) whether there is, besides the matter of sensible ousiai, another matter, and (b) whether there are ousiai other than perceptible ones, e.g. numbers (cf. Books M and N). The second question concerns the unity of the definiens, the answer to which will be found in Z 12, and H, chs. 3 and 6.

The text of the first and second questions runs as follows:

*Met.* Z 11, 1037a10-20: We have to consider later (1a) whether there is, besides the matter of such ousiai as these, any other kind of matter, and (1b) whether we should look for some other kind of ousia, for instance number or the like. It is in fact for this purpose that we are attempting to identify (διορίζειν) sensible ousia<sup>188</sup> too, since the

<sup>186</sup> Cf. *Met.* Z 10, 1036a6-7 (my section 9.63).

<sup>187</sup> Most commentators (among them Bostock, e.g. 76; 167) are of the opinion that Aristotle's ontology does not include particular forms. In fact, his ontology includes *particular* forms only, as in general only particular substances (which is *in confesso* among the interpreters, for that matter). His logic and epistemology, of course, do admit of universals, but these are merely conceptual tools. See Frede & Patzig, I, 48-57, and II *passim*, and my sections 9.63 and 10.71.

<sup>188</sup> The Greek has the plural οὐσίαι. For the collective use of the plural in

study of sensible ousia is in a way the task of physics and second philosophy. For a natural philosopher must have knowledge not only of the matter of things but also, and more especially, of the ousia as conveyed by the definiens. <We must also consider later> (2) in the case of definitions (2a) in what sense the elements of the definiens are <discernible> parts, and (2b) what it is that makes the definiens a unifying formula. Evidently, the <definiens's> objective content (πρᾶγμα) is something one; but what makes it so? For clearly it has parts.

This passage contains an implicit admission by Aristotle that the conception of mathematical objects as having a form-matter structure analogous to that of physical objects needs further examination.<sup>189</sup> This examination is postponed to Books M and N. In the opening chapter of *Metaphysics* M, the general problem concerning the status of mathematical objects is phrased thus (1076a32-36): "If the objects of mathematics exist, they must exist either in sensibles, as some say, or separate from sensibles (this is also said by some people); and if they exist in neither of these ways, either they do not exist at all, or they exist only in some special sense. Hence the theme of our discussion will not be whether they exist but how they exist".

In M 2 the position that mathematical objects should exist as ousiai of a higher degree than bodies is rejected (1077b12-17). They are prior to sensibles only in definition, and they cannot exist somewhere apart. That is to say, they only possess a logical status in the mathematician's mind, who, focussing on the quantitative aspects of the sensibles' being, goes on to grasp these and state them in appropriate definientia. But, as was already shown earlier (1076a38-b11), it is not possible for them to exist *in* sensibles either, and so it is apparent that they either do not exist at all, or merely in a special sense; and, accordingly, with regard to mathematical objects the notion 'be' is applied in a qualified way (οὐχ ἀπλῶς); for we use the term 'be' in many ways.

The priority in definition was explained before, mainly by opposing it to priority in subsistence. The passage is the more interesting as it contains the semantic tool, 'addition' (πρόσθεσις).<sup>190</sup> Aristotle claims that some thing's logical (formal) priority, such as the priority of the definiens of a certain ontic aspect inhering in a particular

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Greek where we may use the singular indicating the referent qua type see Kühner-Gerth II, 16.

<sup>189</sup> Cleary (1995), 455.

<sup>190</sup> *Met.* M 2, 1077b1-11, discussed in my section 11.52.

concretum, over the concrete particular (τὸ συνόλον) does not entail its priority in subsistence (οὐσία). This is explained with regard to the proper object of mathematics, say, the mathematical: just as in the sensible concretum ‘pale man’, although the property, ‘pale’ has logical priority over the concretum ‘pale man’, it does not exist apart from it, i.e. is not prior in subsistence. Likewise, Aristotle means to say, you have to be aware that even though the quantitative features of sensibles have logical priority over the sensible concretum they inhere in, they are posterior when it comes to being subsistent. To arrive at subsistence, these features need to dwell in a sensible concretum (σύνολον), or, putting it logico-semantically, the concepts of mathematics need the addition (πρόσθεσις) of the concepts of their hypokeimena, the sensibles, to make up the notion of subsistent being. So Aristotle concludes (1077b9-11): “Hence it is plain that the product of <mathematical> abstraction is not the prior thing, nor is that which is produced by adding determinants <such as ‘pale’, mobile’ or ‘circular’, ‘square’> the posterior thing, <when it comes to priority in subsistence>”.

Finally, in the third chapter of Book M, Aristotle makes it clear that the mathematician considers objects that do not exist separately *as if* they existed by themselves. After he has refuted all the other possible positions concerning the status of mathematics, Aristotle proceeds to give his own account. The main purport of his argument throughout is to elucidate specific focalizations applied by the different disciplines, which single out their respective proper objects qua as many ontic aspects of the sensibles, without assuming, however, their subsistence apart from the sensibles they inhere in. It is of major importance to see that Aristotle is speaking of sensible particulars (such as bronzen spheres, wooden circles, and so on, all taken as a σύνολον, composed of a substance and a mathematical property), not of different species of quantity, as is sometimes assumed by commentators.<sup>191</sup>

*Met.* M 3, 1077b17-22: Now, just as<sup>192</sup> universal entities [i.e. properties universally assignable] in mathematics do not concern things that are separate from the *things having* magnitude and the things that are of a

<sup>191</sup> Cleary (1995), 307. The salient point is that one should take the words τὰ μεγέθη and τοὺς ἀριθμούς to refer to concrete sensibles (i.e. ‘things of a certain size’ or ‘things of a certain number’), not the properties, magnitude or number. See the semantic Main Rules RMA and RSC (section 1.71), and my section 12.32.

<sup>192</sup> The Greek has “just as also, likewise also”; cf. 1077b23. For this use of the first (superfluous) καί see Liddell & Scott, s.v. B 2 b.

certain number, but are about these things, albeit those things not taken in their capability of having magnitude or being divisible: clearly, there may be statements (λόγοι) and proofs (ἀποδείξεις) too about the sensibles having magnitude, not qua sensible, but qua having those properties.

This comparison is somewhat elliptical in that it holds a twofold opposition, one between universal properties compared to statements and proofs concerning these properties; the other — in the wake of what has been claimed in the previous chapter, 1077b1-11 — between the concretum possessing a property taken together with its property just as a whole (σύνολον), and this concretum qua bearer of just this property. What Aristotle is speaking of is not the difference between general or universal mathematics, on the one hand, and geometry and arithmetic, on the other<sup>193</sup> — which would be quite immaterial to the present line of argument, for that matter — but rather the difference between sensibles *sec*, as the natural bearers of the mathematical properties and referents of mathematical statements and proofs, on the one hand, and these sensibles taken precisely qua possessing the mathematical properties, but quite irrespective of their being sensibles.

Aristotle's claim about the mathematician's practice is twofold:

(1) When the mathematician frames the special concepts, statements and proofs tied up with his particular discipline, his observations always concern sensibles, definitely not things possessing separate existence, in the Platonic sense or any other way.

Having thus established again and again that the mathematical tools and devices all concern sensibles, this position should be qualified to prevent any misunderstanding about the mathematician's proper object:

(2) The mathematician's concepts, statements, and proofs do concern the sensibles, not, of course, qua *sensible* bearers of the properties he is interested in, but qua bearers of just these properties as substracted from their being sensibles.

On this interpretation alone of our passage, I take it, one can apprehend the continuation of the argument, dealing with our general capability of applying different focalizations to the outside sensibles, for instance those used by the natural philosopher, alongside those within the mathematician's domain, by taking sensibles qua mobiles or qua bodies, having planes, lines etc., respectively. In

<sup>193</sup> Pace Ross (Oxford Transl. *ad loc.*, n. 2), and Cleary (1995), 307f.



fact, Aristotle is extending the argument to scientific practice in general, by showing that you can focus on all sorts of ontic aspects falling to a thing that are actually at the focus of your interest, despite the fact that they are coincidental to its proper, subsistent mode of being, and compare them to its subsistent mode of being or any other of its features that are also coincidental to what you are focusing on.<sup>194</sup> In all these cases too there is not a single ground for postulating separate existence of the diverse ontic aspects involved. In this context, Aristotle noticeably emphasizes that the properties under discussion are strictly individual, bound as they are to the concrete particular they inhere in:

*Ibid.* 3, 1077b22-30: For just as there is frequent talk (πολλοὶ λόγοι) <about sensibles>, but only qua mobiles, without reference to the quiddity of each of them, as well as to the coincidental attributes, and as it is not therefore necessary that there should be either a mobile of a sort which is separate from the sensible thing or is some demarcated<sup>195</sup> nature *in* the sensible thing — so too concerning mobiles there will be accounts (λόγοι) and pieces of true knowledge (ἐπιστήμαι), not qua being in motion but only qua bodies, or again only qua planes, or qua lengths, or qua divisible, or qua indivisible with position, or just qua indivisible.

On the assumption that it is possible to have diverse focalizations, none of which force us to postulate that the features focussed upon have separate existence, one is entitled to speak of *there being* mathematics which are endowed with the 'ontic' character ascribed to them by the mathematicians (1077b32-34). This holds good of all sorts of disciplines, and the matter-subtracting discipline of mathematics has no peculiar position on this score. Just as it is true to say of the other pieces of knowledge too, in an unqualified way (ἀπλῶς), that they are about precisely *this* (e.g. not about the pale, if the healthy thing is pale, and the knowledge is concerned with health), i.e. about precisely *this* or *that* of which each piece of true knowledge is — of the healthy if it addresses its object qua healthy, of man if it

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<sup>194</sup> This may be a coincidental one as well as an essential συμβεβηκός. Cleary (following Apostle's translation of the passage: "the attributes that follow from it = the whatness") takes (314f.) Aristotle to be speaking here of a sensible's essential attributes; but the αὐτοῖς (at b24) refers to the foregoing 'sensibles', not to 'whatness of each'; cf. at 1077b35-36, where συμβεβηκός is instanced by 'white' and 'healthy'.

<sup>195</sup> I.e. not forming a homogeneous whole with the particular and, accordingly, not strictly individual. This is an additional argument against all those who reject the idea of particular forms as *unAristotelian*.

addresses its object qua man — likewise it is with geometry: if its objects happen to be sensible, but it does not take them qua sensible, the mathematical pieces of knowledge obtained will not therefore be of the sensibles <qua sensible>, nor, spare me the alternative,<sup>196</sup> of other things separate from the sensibles (1077b34-1078a5). For mathematical the same holds as for all other properties of sensibles: Many properties attach to things in virtue of their own nature as possessed of each such character. So there are properties peculiar to the animal qua female or qua male, but this does not imply that there is 'female' or 'male' separate from animals. It is likewise that properties such as lengths and planes are attached to things, merely as belonging to these things (1078a5-9).

Cleary (1995, 323f.) is quite right in claiming that what Aristotle is trying to establish here is that the mathematical disciplines are about sensible things under some description (in my terminology, focalization and categorization), and not about separate entities. In the course of that effort, he makes the general claim that many things belong *per se* to things in so far as each of them has such-and-such a character. As for Aristotle's comparison between considering an animal qua male or qua female and studying sensible things qua lengths or qua planes, Cleary (*ibid.*) thinks it is not entirely clear whether the parallel is intended to be exact or whether it is merely a loose analogy of the following sort: just as there are certain *per se* attributes to animal qua male, so too there will be other *per se* attributes that belong to sensible things qua lines. If the comparison is to be taken loosely then mathematical attributes, Cleary infers, are not essentially related to sensible things. In a footnote (324, n. 116), he suggests that one might think that Aristotle hardly needs such a relation if he wishes to explain how mathematics can 'abstract' from sensible things. On the other hand, Cleary remarks, referring to *An.* I 1, 403a12-16, sometimes Aristotle hints at a close connection between body and geometrical concepts like tangency.

Cleary's worries betray a slight misunderstanding on the purport of Aristotle's comparison, I am afraid. The problem is not whether the analogy between biological properties and mathematical ones is exact or merely a loose one, since it does not concern the ways in which attributes like male and female fall to certain sensibles qua animals, as contrasted with (or compared to) mathematical attributes

<sup>196</sup> My rendering of οὐ μὲντοι at 1078a4, which may indicate a strong protestation, eagerly casting aside something. Liddell & Scott s.v. μὲν B II 4b.

belonging to them (and other material entities as well) qua bodies. The analogy actually bears on our logical (scientific) approach. Just as to the biologist the attributes, 'being male' and 'being female' are essential because of his proper focalization as a biologist, likewise mathematical attributes are essential to the mathematician's proper approach to the sensibles, irrespective of the ontic relationships between the sensibles in question and their properties. What Aristotle intends to say is that mathematical attributes are just as sensible-bound as biological properties like maleness and femaleness are; and, no matter under what description ('focalization') you may take them, the discipline in question, either biology or mathematics, is about sensible things under a certain description, not about separate entities.<sup>197</sup>

Overviewing now the whole discussion of *Met. M*, chs. 1-3, there is not a single reason to assume with Cleary (454) that when postponing the discussion of the status of the mathematical to Book M, Aristotle perhaps still had problems with "pale ghosts of the old Platonic Intermediates". No doubt, *Met. Z*, chs. 10-11, do contain his final view on their status, and the subsequent inquiries to which Aristotle postpones the discussion provide a development of his firm conviction about the logico-epistemological status of the mathematical as purely man-made.

### 9. 66 *Aristotle's summary of the foregoing discussions*

A survey summarizes, and rounds up, the discussions of form and quiddity embarked on in *Z* 4 and continued in *Z*, 5-6 and 10-11:

*Met. Z* 11, 1037a21-b7: We have now said, universally and for all cases, what a quiddity is, and in what sense it is the thing in its own right; and why of some things the definiens contains the parts of the thing defined, while of others not; and also that the definiens of the subsistent entity will not contain those parts qua matter, which indeed are not parts of the ousia in that sense, but of the concretum. And in a way this ousia has a definiens, in another it does not: when taken together with its matter it does not have a definiens, for matter is indeterminate, but it does have one with reference to its primitively informing ousia. (Thus a man has the definiens of the soul). For the

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<sup>197</sup> Some lines earlier (322), Cleary rightly speaks of "a comparison with an existing *logical* (italics mine) situation that he [Aristotle] considers unproblematic". Incidentally, Cleary less fortunately talks (324) of "attributes that belong to sensibles qua lines". In fact, the sensibles are taken qua having lines or 'being lineated', so to speak.

ousia is the indwelling form, after which the compound of the form and the matter is called ousia. For instance, 'concavity' is such a form, and from this and 'nose' there is formed 'snub nose' and 'snubness'. But the ousia that is the compound whole, e.g. snub nose or Callias, contains matter as well.

We have also stated that in certain cases the quiddity and the thing itself are the same, for instance, analogically to the case of primary ousiai, crookedness and the quiddity of crookedness, in the case that crookedness is primary. (By 'primary' I mean the ousia that is *not* named owing to its being in something that belongs to a different category which underlies it as matter). But in the case of things that are <named> as matter, or as taken together with their matter, there is no sameness of 'thing' and its quiddity. On the other hand, they are not only<sup>198</sup> one coincidentally either, in the way that Socrates and the educated <thing> are; for these are the same <only> coincidentally.

This summary, which is obviously incomplete (ignoring e.g. Z, chs. 7-9),<sup>199</sup> states some things in a setting which is slightly different from that of the previous chapters. It is, however, beyond any doubt that throughout this summary the semantic approach is predominant. To begin with, the opening lines clearly allude to the fact that if we name a thing after what it is in its own right its quiddity will be grasped. Anything claimed in the summary can only be correctly understood from the viewpoint of semantics.

### 9. 67 *The 'first' or 'immediate' οὐσία*

The nature of the ousia of the concretum — in fact the only one that matters in the metaphysician's investigation about the true nature of the outside things — is a source of difficulties because of its distinctive feature of being *enmattered*. When the ousia is taken together with its matter, it cannot be properly defined, since matter is indeterminate, and will therefore frustrate any attempt at defining or 'quiddity-searching'. The way out consists in grasping precisely *that* component which causes this matter to be informed and is, consequently, susceptible of definition. This component is what I have termed earlier the 'immediate' or 'comprehensive' ousia, i.e. the specific form, which encompasses the totality of essential features making up the thing's quiddity, such as 'manhood', which includes all superior generic or

<sup>198</sup> I follow Frede & Patzig (II, 220) in their interpretation of the manuscripts reading οὐδέ ('and not only ... either').

<sup>199</sup> Bostock's difficulties with the summary are for the most part due to his mistaking the character of what he oddly terms 'universal compounds'.

differential forms ('animality', 'rationality', 'corporality', 'subsistence', and any other form in between).

Frede & Patzig rightly reject Ross's suggestion (re 1037a27) that when speaking of matter, Aristotle must have 'prime matter' in mind. They (II, 210; 219) identify this 'primary ousia' with the form, truly enough, but explain (I, 37ff.; II, 114) the label *πρώτη* as referring to the form's priority to both the thing's matter and the thing itself taken as a compounded whole. Besides, they seem to take the epitheton 'primary' to rule out quiddities belonging to non-substantial categories ("Widerfahrnisse" = 'things befalling', 'appurtenances'). But this is not compatible with what Aristotle asserts at 1037b2-3, lines they regard as a gloss (following Jaeger), because they are not found in Asclepius and pseudo-Alexander, and, in their view, do not fit in well with the subsequent definition of *πρώτη οὐσία* (1037b3-4). However, this definition surely does not exclude quiddities from non-substantial categories, since it only rules out the appellation of quiddities which steps over from one category to another. It must strike the reader of this passage (quoted above in full) that the definition of 'primary substance' is offered by Aristotle in order to explain his claim about 'befalling things' like crookedness to the effect that crookedness too can be called up as a primary ousia (in Aristotle's words: "in the case that crookedness is primary"; 1037b2-3). Clearly when attempting to (generally) define a thing's crookedness as such, one should leave its actual inherence in this or that particular out of consideration, and refrain from stepping over from its own category, Quality, to that of Substance, to which its underlying thing belongs. So we have good reasons to look for another explanation of the label *πρώτη οὐσία*.

The key to a correct understanding of this notion seems to lie in the restrictive condition phrased thus at 1037b2-3: "in the case that crookedness is <taken to be> primary". This remark implies that coincidental qualities such as the one mentioned can also be brought up as 'primary', i.e. by using a substantive appellation to stand for the quality of 'being crooked', namely 'crookedness'. This does not alter the fact that for the most part it is subsistent entities from the category of substance that are at the focus of interest whenever we frame statements about things in the outside world, so that not coincidental features, but the subsistent entities they inhere in are 'primary'.

From the angle of semantic analysis, the label *πρώτη οὐσία* refers to *that* ousia which is the first or immediate one to be found if the

concretum under consideration is to be named in its own right, and not after one of its coincidental features. The coincidental manner of naming things comes down to calling up the thing by transgressing the categorial borderlines, i.e. stepping over from its own essential category ('being-a-man-animal' etc. .... 'substance', for instance) to that of one of its coincidental features ('being-pale', 'being-coloured' etc. ... 'qualitatively-affected').<sup>200</sup> For instance, to define a pale man in his capacity of being pale will involve a transgression from the category of substance to a non-substantial category. But sometimes the semantic procedure goes the other way round, viz. if one steps over from a non-substantial category to the category of substance;<sup>201</sup> this too is comprised in the formula κατ' ἄλλο λέγεσθαι. In that case — so we learn from the summary<sup>202</sup> — the process of defining what e.g. is precisely paleness or crookedness could be frustrated, owing to our taking it together with its material component in the outside thing, our stepping over, that is, from its proper non-substantial category ('quality') to that of substance, to which the feature under examination coincidentally belongs (\*'the pale' or \*'the crooked').

However different the bearings of these two semantic *modi operandi* may be, there is one requirement they should both meet equally, viz. to bring about the immediate quiddity (πρώτη οὐσία), and not one of the higher ones. The text of the summary provides us with a fresh periphrasis of what is meant by πρώτη οὐσία, this time appropriated to the case in which a non-substantial property, like crookedness, is to be defined quidditatively. The description is closely related to the οὐ κατ' ἄλλο formula we have encountered before. But while the earlier formula focussed on a thing's being spoken of, by using a term from a category different from the one the thing belongs to in its own right, the present formula pinpoints the thing's peculiarity of not being named after its being enmattered in something else falling under a different category which underlies it.

Thus generally speaking, the term πρώτη οὐσία turns out to have the focal meaning of 'first (occurring)', either (1) in the order of

<sup>200</sup> For the legitimacy of this stepping over see *Top.* I, 9, where it is argued that the τί ἐστι question can be applied to items from the non-substantial categories as well as those from the first category.

<sup>201</sup> A sample of it is found in my section 9.41 (commenting on Z 6, 1031b13).

<sup>202</sup> Providing that we do not cancel the lines 1037b2-3, as is done by Jaeger and Frede & Patzig (II, 219), unlike Bostock (170) and the present author. This athetesis seems to ignore the use of the conjunction ὥσπερ at 1037b1, which suggests that there a case *analogical* to the usual ones in which there is a transgression from the category of substance will be discussed.

existence (as is the ‘primary substance’ of the *Categories*), or (2) in the order of logico-semantic analysis. In the latter sense, then, it has a twofold connotation, the immediateness referring to either (2a) the exclusion of the higher genera and differentiae of the same category, or (2b) the elimination of any transgression from the thing’s proper category (either the substantial or one of the non-substantials) to a different one. I indicate the difference between cases (1) and (2) by rendering ‘primary ousia’ and ‘immediate ousia’, respectively.

Returning now to the summary, in the final sentence things are dealt with when they are spoken of as matter, or as taken together with matter. Now if they are called up in this way, the two components compared to one another are the particular thing, at one time taken as *this* informed hypokeimenon and as the informing quiddity at the other. It is now claimed by Aristotle that there is a kind of sameness (extensional or numerical identity) of the thing’s quiddity and its matter (ὑποκείμενον). This sameness should be characterized as something in between straightforward sameness (such as between ‘man’, ‘animal’, and ‘rationality’ in Socrates, which are all of the same category, i.e. that of subsistent being or substance), and the sameness of the merely coincidental type, found in ‘educated Socrates’, which puts on a par two features coming from two different categories.

#### 9. 68 *What makes a definiens one definite thing?*

In spite of the fact that its position in the totality of Books Z-H is not very clear,<sup>203</sup> the subject matter of chapter 12 is not difficult to apprehend. Because of the fact that every definiens has different parts the question must arise whether this is not likely to destroy its unity, including that of the quidditative form it signifies. The gist of the problem has already been pointed out at Z 11, 1037a18-20: “When it comes to definitions we must consider in what sense the elements of the definiens are parts, and in virtue of what the act of defining produces a definiens that is one; for evidently the object (πρᾶγμα) is one; but in virtue of what is it one, despite its having parts?”. We have to ascertain what it is precisely that holds these parts together so as to make them *one definite* thing.<sup>204</sup>

<sup>203</sup> Frede & Patzig II, 221, 223; Bostock, 176f.

<sup>204</sup> For the pivotal role of a thing’s being ‘one and definite’ see my sections 4.45; 9.34-9.35.

Embarking on the problem of what exactly constitutes the unity of the definiens, Aristotle first refers to his discussions of definition found in the *Posterior Analytics*,<sup>205</sup> “for the problem stated there is useful for our inquiries concerning ousia”. In the present chapter of course, the problem is not about any account whatsoever (such as ‘pale man’), but is confined to definientia, and therefore concerned with the unity of genera and differentiae belonging to the same category. What is intriguing about the manner in which the present problem is pinpointed is that coincidental compounds, which naturally overstep different categories (like ‘pale man’), are not at issue, but one-category compounds such as ‘two-footed animal’ said of man. Unlike the former, they cannot have their unifying principle in something underlying them:

*Met.* Z 12, 1037b10-22: The problem I mean is this: in virtue of *what* is that whose account we call a definiens something one? For instance, let the definiens of man be ‘two-footed animal’; then, why is this something one, and not a plurality consisting of two-footed *plus* animal? Now in the case of man and pale there is a plurality whenever one does not fall to the other, but something one, when it does and the underlying thing, man, has a certain attribute; then indeed they become something one, and we have ‘the pale man’. In the present case [of ‘animal’ and ‘two-footed’], however, <<where there is no relationship by attribution, should there be, then, a relationship by participation?>>.<sup>206</sup> But there it is not the case that one [viz. animal] partakes of the other, since the genus is not thought to partake of its differentiae;<sup>207</sup> if it did, the same thing would partake of opposites at the same time (for the differentiae which differentiate the genus are opposites). And even if it does partake of its differentia the same problem would again arise when there is more than one differentia, e.g. ‘endowed with feet’ [= ‘terrestrial’], ‘two-footed’, and ‘wingless’.

The problem is the more baffling as the definiens must be one and have an ousia as its object, “so that it must be of some one thing (ἐνός

<sup>205</sup> Definition is extensively discussed in *APo.* II, chs. 3-10, and 13. For that matter, Aristotle now proposes to discuss first what was omitted in the treatment of definition in the *Analytics* (1037b8-9). The reference seems to be to *APo.* II 6, 92a29ff.

<sup>206</sup> If there is not a major lacuna in the text handed down to us by all MSS, as is understandably suggested by Frede & Patzig (II, 227), the construction is tantalizingly elliptical. My filling this gap is based upon the juxtaposition of ‘participation’ and ‘attribute’ as found at Z 4, 1030a13-4, where they act as two possible foundations for assigning names to a thing.

<sup>207</sup> In Aristotle’s view, there is a relationship of ‘participation’ between εἶδος and its genera and differentiae, but not between the genus and its differentiae and εἶδη.



τινός), because the οὐσία too is representative of some one thing and a *this*, as we say" (1037b26-7).

Aristotle now proposes to deal with the procedure of defining by division, which was the favourite procedure as early as in Plato's time. In such cases the definiens consists only of what is called τὸ πρῶτον λεγόμενον γένος (the 'immediate genus')<sup>208</sup> and one of its differentiae, whereas the higher genera are the immediate genus *plus* the differentiae that are taken with it. For instance, the immediate genus of, say, Socrates, (or the particular man, [*x*]) may be 'animal', the next 'two-footed animal', and after that 'wingless two-footed animal'; and likewise if the expression contains some more components still. But in general the number of components does not matter. "Now if no genus whatsoever<sup>209</sup> exists apart from the forms it embodies, or, if you like, it exists only as the forms' matter [...], clearly the definiens is the account composed of the differentiae" (1037b27-1038a9).

Next some rules are presented (1038a9-30) for correctly dividing the differentiae in order to arrive at those species that are no longer susceptible of differentiation (τὰ ἀδιάφορα).<sup>210</sup> The quintessence of the correct process consists in continually dividing the thing differentiated qua being so-and-so differentiated; for instance, you should divide 'footed animal' into 'cloven-footed' and 'uncloven', not into 'winged' and 'wingless'. On the right procedure, the ultimate differentia taken together with its proximate genus will be *the ousia*<sup>211</sup> of the object (τοῦ πράγματος) and, consequently, *the* definiens, and so the ultimate differentia will be *the* substantial form (τὸ εἶδος καὶ ἡ οὐσία). The author concludes with the remark that the description of the previous procedure should suffice as our first attempt at stating the nature of proper definitions.

It has been remarked<sup>212</sup> that in *PA* I, chs. 2-3, Aristotle severely criticizes any definition obtained by a division which is 'properly carried out' as described and recommended in *Met.* Z 12, since they are, Aristotle claims in the *PA* passages, both useless and impossible.

<sup>208</sup> In this case Ross aptly renders it 'the first-named genus'.

<sup>209</sup> For this generalizing sense of ἀπλῶς see my section 1.3.

<sup>210</sup> These are the infimae species (in the sense of 'the lowest and ultimate forms') immediately informing the particular.

<sup>211</sup> My rendering aims to take into account the use of the (definite) article at a19 (ἡ οὐσία = 'the ousia which it is all about') in predicate position, which is quite exceptional in Greek. The same holds good for '*the* definiens' at a20, and '*the* substantial form' at a 26. For the pregnant sense of the definite article, 'the thing *involved*' see Verdenius (1981), 348; 351, and Kühner-Gerth I, 593.

<sup>212</sup> Frede & Patzig (II, 237f.), and Bostock, 183f.

In this biological work the author advocates the method of defining a species of animal by differentiating it from others by means of many different lines of differentiation, instead of using only one line, as e.g. footedness, which, as we have seen, is the procedure endorsed in Z 12.

This observation cannot be viewed, I think, as a disclaimer of what has been recommended in Z 12. In point of fact in Z 12, in which the unity of the definiens is the main issue,<sup>213</sup> Aristotle warns us against dividing a differentia (e.g. 'footed' as a differentia of animal) by stepping over to a different line of differentiation ('winged' or 'wingless'), instead of sticking to the differentia 'footed' and further differentiating it ('cloven-footed' and 'uncloven'). To put it otherwise, Aristotle tells us to stick to the animal's footedness, because to include a different property that does not concern the animal's feet is bound to jeopardize the unity of the definiens. On the other hand, *PA*, which is a work in comparative biology, has to demand a lot more from the division procedure in order to arrive at an adequate list of the highly-varied multitude of animals. In such an enquiry the simple process of bifurcation will not do, since if one uses this method "specifically distinct animals will find themselves in one and the same division" (*PA* I 3, 643a13). Now this would violate one of the requisite conditions to be met with in comparative biology, to wit the requirement that "different groups must not be included in the same division" (*ibid.*, 643a15).

As a matter of fact right after this passage, there is a parenthesis (643a24-25) on the constitution of the particular's form, which is on the same footing as the doctrine found in *Met.* Z 12: "The (ultimate) differentia enmattered is the animal's form (εἶδος). For no part of an animal is without matter, nor is it just matter".

### 9. 7 *No universal is οὐσία*

Chs. 13-16 aim to undermine the credentials of the third claimant to the title of 'true ousia' — the universal — stating straightforwardly that no universal whatever can be ousia,<sup>214</sup> and no ousia is composed

<sup>213</sup> As it will also be in *Met.* H 6.

<sup>214</sup> See also Heinaman (1980). In his paper "Universals as Potential Substances: The Interpretation of *Metaphysics* Z 13", in Burnyeat (1979, 107-26), G.J. Hughes has made an attempt to weaken this unmistakable claim. He argues for assessing

of ousiai as its parts. The first two chapters (13-14) of this cluster discuss the claims of 'the universal' in general, and in its wake that of the genus (which was announced in Z 3 as the fourth applicant), including those peculiar universals, the Platonic Forms. From ch. 14 onwards, the discussion is somewhat complicated by Aristotle allotting his attention to two different, but closely related matters, viz. the drawbacks of the Platonic doctrine of the Forms, on the one hand, and the unmistakable shortcomings of the not-universal or particular when it comes to defining a thing, on the other.

### 9. 71 *Aristotle's key problem concerning particular forms*

Surveying the main lines of thought developed in chs. 13-16, and putting them into the framework of the foregoing discussions, Aristotle obviously deems it useful to rule out the way in which Plato had qualified the 'sameness' (actually 'similitude') of a particular thing and its quiddity. On the one hand, Plato had recognized the particular's immanent essence (as partaking itself of the transcendent Ideal Form),<sup>215</sup> owing to which there is in fact (extensional) sameness of the particular and its essence. On the other hand, he strictly divorces the particular's being from its true ontic cause, the Ideal Form. Thus on the Platonic view the search for a thing's true ousia forces us into the transcendent Realm of Being, which throughout his work Aristotle so energetically rejects as meaningless and superfluous.

That is why Aristotle must show that Plato's solution to the problem will not do, and inevitably will lead its adherents into insuperable difficulties. In terms of the present discussion of chs. 13-16, this

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Aristotle's claim in the context of his standard lore of Act and Potency, and thinks that Aristotle assigns to universal the status of potential ousia, which goes beyond their logical status of being universally applicable. Hughes's arguments are far from convincing. See Frede & Patzig II, 260. At *An.* I 1, 402b5-8, Aristotle raises the question about the common term 'living creature' (ζῷον) whether it is 'nothing' as opposed to 'horse', 'dog', 'man', 'god', or at least only secondarily significative; next he says that this indeed holds of any common appellation: "In a similar way any other common appellation will be assigned". Likewise at *An.* II 3, 414b20-28, to look for a common definiens (τὸν κοινὸν λόγον), which will fail to express the peculiar nature of any of the objects covered by it, is called absurd.

<sup>215</sup> For the immanent status of the Platonic Forms, which should be well distinguished from their transcendent status, and the pivotal role of the enmattered forms in Plato's ontology and epistemology see De Rijk (1986), 57-65; 106-9; 327-47. Also Guthrie IV, 113ff.; V, 417ff.

means that Aristotle has to make clear two things. First, the doctrine of transcendent Forms cannot really explain the existence of the outside particulars, since the Platonic Forms are themselves no genuine ousiai. Moreover, since they are in fact separate *particulars*, as the adherents themselves say, the Forms will also fail to provide the basis for proper definition and true knowledge. The reader of these chapters has to be aware at the same time that this firm, but two-track rejection of the Platonic doctrine is painfully counterbalanced by the (typically Aristotelian) problem how particular immanent forms are capable of meeting the basic requirement of epistemonik definition, to wit universality.<sup>216</sup> In other words, Aristotle is bound to spell out how true ousia can be both really particular and the genuine basis for quidditative definition. It will not come as a surprise, then, that once again the ambivalence of the notion οὐσία plays the key role in clearing up the situation, in the present discussion as well as in the concluding chapters Z 17 and H 1-6, where Aristotle attempts to finally identify true ousia.<sup>217</sup>

#### 9. 72 *The case of the universal dismissed*

After a short introduction (1038b1-8), in which the author proposes to return to the subject proper of the investigation, which is true ousia, and to discuss the remaining claimant, the 'universal', chapter

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<sup>216</sup> Most of the authoritative interpreters of Aristotle deem the basic problem of universality an insoluble difficulty (see Leszl 1972, 278f.) in terms of Aristotle failing to reconcile the requirements of his ontology with those of his logic and epistemology. Leszl (281-98) devotes some pertinent criticism to people who think Aristotle fails in *Met.* M 10 to solve the individual vs. universal problem, and rightly derives (302f.) his own solution from Aristotle's use of the *qua*-procedure: "Hence there *is* knowledge of entities which are contingent and transitory, when they are considered in their essence. On the other hand, when he [Ar.] points out that there is no knowledge of what is contingent and transitory, he is stressing that there is no knowledge of it *qua* contingent and *qua* transitory". However, although Leszl — whose criticism (303-13) of the Cherniss-Owen view (Owen 1965) is quite to the point — does not consider these two positions incompatible, he seems (*ibid.*) to suggest that Aristotle's use of the *qua*-procedure is rather questionable in itself. Unfortunately, Leszl's own solution to the 'universal vs. particular' problem is somewhat obscured by his continually interpreting (298ff.) Aristotle's recognition of the metaphysical status of particulars in their capacity of satisfying a certain (universally applicable) εἶδος in terms of propositional knowledge, instead of knowledge by acquaintance (which can, of course, *also* be expressed by a corresponding statement, but this is just a matter of syntax).

<sup>217</sup> The problem how *particular* forms can be properly known has been eagerly discussed in the last few decades. Bostock (185-90) offers an impressive report of the debate. I shall discuss this issue in my sections 10.71-10.75.

13 sets out to argue (1038b8-1039a14) that the universal cannot be ousia, regardless of whether it is taken as (what is signified by) a universal name or appellation, or as constituent of a genuine ousia. In his introduction Aristotle recalls the ambivalence of the notion hypokeimenon, or rather the notion of ‘ambivalence’ in general, which has been the leading one in the foregoing statements about ousia:

*Met. Z* 13, 1038b1-8: Since the subject of our investigation is ousia, let us return to it. Just as the substratum and the quiddity<sup>218</sup> are called ousia, so also is the universal. Two of these we have already dealt with, the quiddity and the substratum. And of the latter we have stated that it is underlying in two ways, either by being a this (as e.g. animal underlies its attributes), or as matter underlies its actuality. But some people think that it is the universal which is in the fullest sense a cause and that the universal is the principle. Therefore let us attack the problem from this angle too.

The case of the universal is evaluated from two angles. From the logico-semantic viewpoint it is stated (1038b8-13)<sup>219</sup> that the universal as a logical entity cannot be taken to be the same as ousia, since the thing’s ousia<sup>220</sup> is peculiar to it, in that it does not belong to anything else, while a universal is common to a plurality of things; for *that* is called universal which is such as to belong to more than one thing. This raises the question to which particular the universal appertains exclusively. There are two possibilities: either to all of them, or to none.

The first possibility, which in fact has already been ruled out by the definition of logical universality just given, is discarded by some further arguments. The first argument deduces an odd sequel from this very definition by stating that, on the assumption that the universal should pertain to all particulars alike, they must be the same ‘one thing’ as informed by this same universal, because things whose ousia is one also have one essence and are themselves one (1038b13-15). The author clearly plays on the ontological basis of

<sup>218</sup> The MSS add (at 1038b3) “and the compound of these”. These words are entirely out of place here, as has been convincingly argued by Frede & Patzig II, 242f.

<sup>219</sup> This sentence is introduced by an elliptical γάρ, which might be rendered something like this: “<This claimant’s case is not a strong one either>, for ...”. For this use see 1039a28-29, and my *Index s.v.*

<sup>220</sup> Or should we read πρώτη οὐσία (‘immediate ousia’), with our two oldest MSS (Parisinus and Vindobonensis) instead of πρώτον, which, corresponding to ἐτι at b15, surely makes sense as well (‘firstly’ ... ‘further’).

logical applicability: any common appellation implies a certain nature (feature) shared in by the referents.<sup>221</sup>

Another argument (1038b15-16) says that the distinctive property of the universal, viz. that it is always said of a hypokeimenon, is incompatible with the most distinctive property of ousia — that it cannot be said of an underlying thing. And this leaves us precisely with the second possibility, that the universal is no thing's ousia. *Quod erat demonstrandum*. The argument seems to count among the elenctical proofs, mainly intended to embarrass the opponent.

The author next proceeds (1038b16-23) to look into the alternative, in which it is suggested that the universal could be a common constituent of the particular. This is not the same as the status of the thing's complete quiddity or immediate substance, because now it is taken as being present itself in the quiddity as a constitutive element, as for instance 'animal' in 'man' and 'horse'. In this case there is, no doubt, a definiens concerning the supposedly universal 'animal' which is no less representative of the thing than the complete quiddities 'man' and 'horse' are. However, like the complete ones, such an incomplete quiddity too will always belong to *this* particular man or horse, so that the status of the particularness of the universal remains all in one piece.

The next argument (1038b23-29) starts from the fact that common properties should be regarded as a *quale* (ποιόν) rather than as a 'subsistent this' (τὸ τόδε καὶ οὐσία), and claims that it would be absurd that a subsistent *this* should have a qualitative constituent instead of one bearing on the thing's subsistence. For in that case, it is argued, what is a *quale* and an attribute would be prior to the subsistent *this*, which is impossible, since then they would be separable.

In addition, sticking to the erroneous position that the universal is not a ποιόν but a real subsistent being, you have to admit that in the case of the particular thing, Socrates, there will be an ousia present in another ousia, so that the former one will be the ousia of two things (1038b29-30). These arguments are now summarized:

*Ibid.* 13, 1038b30-34: In general it follows that if a man [e.g. Socrates] and the other things named in this way [i.e. after their being precisely what they are] are ousiai, then nothing in [i.e. being part of] their

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<sup>221</sup> Bostock is forced to reject the argument of 1038b9-15 (see also his problems with harmonizing 1038b16-34), because "it will allow as substance *only* (his italics) the particular forms or essences that belong to one object and no more" (193). Thus he rejects a sound argument only because he does not like the conclusion.

definiens can be the ousia of anything, nor can it exist apart from them or in anything else. I mean, for instance, that no 'animal' exists apart from the particular things. And the same holds good of other elements present in the definiens of things.

On that account, any chance that the universal might be the successful applicant for the title 'true ousia' has gone down the drain. It should be borne in mind, however, that, as often, Aristotle's strategic manoeuvres against his opponents have an elenctical flavour. Many times his arguments are actually intended to undermine opposing views rather than that they express some well-considered, mature position of his own. This way of arguing is also well in keeping with the aporetic approach that comes to the fore in many of Aristotle's investigations, particularly in *Met. Z*. Anyway, we would be making too much of these oscillating discussions if we expected them to shed much light on Aristotle's own position. The only thing we can conclude from them is that no universal attribute is an ousia, which will suffice for the time being in order to discard the universal as a rival. Next, the author adds two more arguments (1039a1-14) in support of his own position:

(a) No common attribute signifies a such-and-such thing (τοιόνδε), nor a this (τόδε τι); if this is denied, the difficulty of the 'Third Man' arises,<sup>222</sup> and many others.

(b) An ousia cannot be compounded of ousiai that are present in it in actuality, though if they are potentially two, they can be one.

The latter outcome contains a difficulty, Aristotle (1039a14-23) has to concede. For if no ousia can be a compound of universals (owing to the fact that a universal signifies a such-and-such thing, not a *this*) and if no ousia can be a compound of actual ousiai, every ousia must be incomposite and so indefinable. Yet all people are convinced, and we have stated it long ago (*Z* 5, 1031a11-14), he says, that it is either only, or primarily, ousia that can be defined. This would mean that there cannot be a definition of anything. Evidently, this conclusion is devastating to any metaphysical investigation. In *Z* 15 and *H* 6 considerable effort will be put into solving this problem.

In view of the fact that Aristotle associates the Platonic conception of Forms with the idea that, qua ontic causes common to all things and everything partaking of them, universals are ousiai, it is quite natural that he should now go on to direct his arrows against Plato's doctrine.

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<sup>222</sup> Cf. *Met.* A 9, 990b17; *SE* 22, 178b36-179a10.

9. 73 *On the communion of forms*

In chapter 14, Aristotle sets out to criticize the Platonic doctrine of Forms, by pointing out that its adherents regard the Forms (ἰδέαι) as ousiai<sup>223</sup> possessing separate existence in a transcendent Domain, but at the same time (ἄμα) hold that the infima species (τὸ εἶδος) is a compound of genus and differentiae. From Aristotle's words — notice the plural τῶν διαφορῶν at 1039a26) — it appears at the outset that he is dealing with the famous problem concerning the Communion of Forms.<sup>224</sup>

If there is such a thing as Man-itself, he argues (1039a30-b4), which exists by itself as a separate *this*, then what it is composed of, namely animality and two-footedness, must also each signify a *this* and be a separate ousia. If then there is numerically<sup>225</sup> one and the same animality in man and horse, how will that one thing, present as it is in two separate things, be one thing? Then again, this animality cannot partake of two contrary things like two-footedness and many-footedness. In a word, *what* is one asserting when one says that the animal is two-footed or terrestrial?

We must infer from this aporia that the animality in each is some different thing. But this conclusion leads to a lot of absurdities — among others, that each one of the animalities in the various animals must be Animality-itself, and if not, the question must arise how these animalities can exist apart from Animality-itself? (1039b7-16). Finally, these unfortunate consequences are not the only ones to be encountered in the case of the sensible world; there are others, which are even more absurd. So there are not forms of sensible things in the way that some hold there are (b16-19).<sup>226</sup>

<sup>223</sup> *Met.* H 1, 1042a15-16.

<sup>224</sup> If Frede & Patzig (II, 264) are right in thinking that up to the final part of the chapter (1039b17-19) Aristotle is dealing exclusively with the Forms in their transcendent status, he would quite wrongly have taken their communion to concern their transcendent status, since to Plato this communion takes place between the Forms as partaken of, i.e. in their immanent status as instantiations. Anyway, Aristotle's objection (at 1039a33-b4) that, for Plato, the Forms 'two-footed' and 'many-footed' seem to belong to the same Form is questionable. See De Rijk (1986), 113-25; 134-9; 144-6; 260-5. Aristotle's objection against Plato is also criticized by Bostock (219f.).

<sup>225</sup> Aristotle explains (a34): "the same in the way that you are the same as yourself".

<sup>226</sup> The discussions of 1039b7-19 are extensively (and variously) commented upon by Ross II, 212f.), Frede & Patzig (II, 272-9), and Bostock (210-4).



9.74 *No particular can be properly defined*

What chapter 15 is all about is definition. It especially concentrates on the indefinability of particulars, including the Platonic Forms, which Aristotle considered to be (putatively) transcendent particulars. At the end of ch. 13, the aporetic discussion had led to the impossible position that there cannot be a definition of anything (1039a14-19). This statement was accompanied by the alternative thesis that “perhaps in a way there can, while in a way there cannot be a thing’s definition”, and the announcement of a later discussion of the question. This chapter sets out to elaborate the alternative thesis.

The position found in the common stream of Greek thought, that true knowledge (ἐπιστήμη) is only of universal, unchangeable things is at the basis of the discussion throughout this chapter. It also has a connection (at 1039b27-29) with the *Posterior Analytics*, where the links between true knowledge, definition, epistemoni proof, with universality is explicitly brought up, as well as the indefinability of the particular, which features so prominently in the present chapter.<sup>227</sup> First the perceptible particulars of the outside world are denied definability, and then the idea of indefinability is extended to the Platonic Forms, which are a class of particulars *sui generis*. Finally the special class of perceptible but indestructible particulars, such as the heavenly bodies, are taken into consideration.

The chapter starts off with some items that have already been given due attention in Z 7-9. The main claim concerns the distinction between two senses of οὐσία (1039b20-22):

(a) the compound whole (τὸ σύνολον), which is the quiddity taken together with its matter; and

(b) the quiddity taken by itself, i.e. conceived of irrespective of its actually being enmattered, not, of course, as though it were really divorced from matter, let alone that it should be a Platonic Form having separate existence.

The crucial difference between (a) and (b) is that the former contains matter and thus a destructible component, whereas the latter does not (1039b22-27).<sup>228</sup> That is why particular sensible ousiai cannot be defined, nor can they be the subject of epistemoni proof, since matter naturally is capable both of being and of not being.

<sup>227</sup> *APo.* I, chs. 8 and 33; II, chs. 3-8; II 13, 97b26.

<sup>228</sup> My section 1.71. Compare the Medieval distinction between ‘significatum materiale’ and ‘significatum formale’; my *Index s.v.*

Hence all particular compounded wholes are destructible, and *eo ipso* there can be no definition or demonstration of such a thing:

*Met. Z* 15, 1039b20-1040a7: Since the compounded whole and the quiddity are not ousia in the same sense — I mean to say that one is an ousia in that it is the quiddity stated by the definiens<sup>229</sup> taken together with its matter, while the other is the quiddity taken in general<sup>230</sup> — therefore the compounded whole may pass away, for it may as well come to be. There is, however, no passing away of the quiddity in the sense that it is ever in the process of passing away. For <in this sense> there is no process of coming to be either, since the quiddity of being-a-house cannot come to be; only that of being-this-particular-house can. Rather, such quiddities are, or are not, in existence without any process of coming to be or passing away; for as we have proved [*Z* 8, 1033a29ff.], one cannot create or produce them. That is also why particular sensible ousiai cannot be defined, or be the subject of epistemonik proof (ἀπόδειξις), because they contain matter, whose nature it is to be capable both of being and not being; for this very reason all of them that are particular are destructible.

Now epistemonik proof concerns what is necessary, and definition pertains to epistemonik proof. And just as knowledge cannot be knowledge at one time and ignorance at another (such a way of cognizing would be opinion (δόξα), so also epistemonik proof and definition cannot apply at one time while not at another, and of what is capable of being otherwise there can only be opinion. [1041a1] Hence it is plain that there can be neither definition nor epistemonik proof of such a thing. For the things submitted to destruction are unclear to those who try<sup>231</sup> to have knowledge of them, as soon as they are no longer perceived, and even though the same accounts<sup>232</sup> are retained in the soul there is no longer any definition or epistemonik proof. That is why, when one who is concerned with definition tries to define any particular, he must be aware that it is always possible to refute it; for particulars cannot be defined.

At 1039b24-25 the phrase 'the quiddity of being-this-house' is opposed to 'the quiddity of being-a-house'. This phrase is commonly taken exception to by modern commentators.<sup>233</sup> Bostock (217)

<sup>229</sup> For this rendering of λόγος see my *Index*, s.v.

<sup>230</sup> I.e. 'not specifically determined as the one enmattered in *this* particular'. For the use of ὅλως at 1039b22, where many interpreters are inclined to conjecture ἀπλῶς, see Frede & Patzig II, 132f. (re *Z* 8, 1033a31).

<sup>231</sup> I take the present participle ἔχουσι at 1040a3 *de conatu*. By doing so one is not compelled to take (with Frede & Patzig II, 286) the key-term ἐπιστήμην used loosely to stand for just any kind of cognition, which would be unfitting in this context. Similarly, the ὀρίζεται at 1040a6 need to be taken *de conatu*, meaning "one cannot succeed in defining particulars" (1040a7).

<sup>232</sup> Or should we render "the definientia" <involved>? Frede & Patzig: "Formeln bzw. Argumente".

<sup>233</sup> Burnyeat, 142f.; Frede & Patzig II, 281f.; Bostock, 216f., who, following Heinaman (1979, 253, n. 8) aptly refers to *Cael.* I, 9, where two similar phrases are

rightly takes Aristotle to focus on the form as enmattered in this particular thing, but none the less, quite remarkably, keeps opposing it to the 'particular forms' thesis, and asserts that the passage "does not mean to mention particular forms or essences at all". He even infers from it that "when he wrote this passage in Z 15, Aristotle did not think that there were such things as particular forms. For otherwise he must have realized that they were highly relevant to his argument in this chapter, and yet in fact the chapter ignores them altogether, despite the suggestive phrase 'being for this particular house'." *Quae volumus ea libenter credimus!* I cannot understand either that even Frede and Patzig, who are *the* champions of the 'particular forms' thesis, are of the opinion that the distinction between the two (viz. 'das ein Haus zu sein' and 'das dieses Haus zu sein') is bound to pose difficulties.<sup>234</sup>

However, in Aristotle's view, (a) particular things *as such* have particular (substantial and coincidental) forms, which precisely invest them with individuality; and (b) this particular form *qua* enmattered in *this* particular parcel of matter semantically (or referentially) coincides with the whole of the composite, so that we may speak of them in terms of coming to be and passing away. That Aristotle so easily asserts (e.g. at Z 11, 1037a25-30) that particulars are indefinable, but in a way can be defined, to wit in so far as they possess *particular* forms, is something that can readily be questioned by the modern mind. But we as moderns have to accept, not adopt, Aristotle's firm metaphysical convictions about the coincidence of the enmattered form and the individual,<sup>235</sup> taking them, if you like, as

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found (278a8-9: 'being *this* circle', and a12-13: 'being *this* world'), but he regards them as expressing "just the familiar contrast between the form by itself and the compound of that form in this or that particular parcel of matter". Likewise, Barnes (1994, 83) is wrong in deeming Aristotle to "muff the distinction between universal/singular and generic/specific". *Pace* Barnes, in Aristotle the phrase τὸ καθ' ἑκάστων is not "systematically ambiguous between 'the individual' and 'the specific'". In Aristotle's ontology, 'individual' and 'specific' are two sides of the same coin. One should always be aware of the role of ambivalent usage in Aristotle's strategy of argument; my section 1.72.

<sup>234</sup> Cf. their remarks on p. 284 (re Z 15, 1039b28).

<sup>235</sup> In the final analysis, I think, Aristotle's thought did not admit of a proper assessment of individuality, because his metaphysical universe (as Plato's) ends up in the domain of the *infimae species* (for Aristotle 'atomic' entities indeed). For subtle evaluations of this problem area in Aristotle see Guthrie (1978, 414f.) and (1981), 144; 186, n. 4; 273; 304; Ackrill (1981), 122-6. For Plato's view of the individual see De Rijk (1986), 327-30 and 332-47. A genuinely philosophical assessment of the individual *qua* individual is not found until the end of the thirteenth century with the Franciscan theologian-philosophers. (De Rijk 1995a, esp. 483-7).

unwarranted prejudices. What should really bother us is Aristotle's view of the mental operation of abstraction, which is just as mysterious as Plato's 'looking up to the Ideas' (βλέπειν εἰς τὰ εἶδη),<sup>236</sup> a procedure Aristotle so energetically rejected, together with Platonic anamnesis. His own theory of abstraction, which is meant as the revelation of form,<sup>237</sup> can hardly be considered an entirely satisfactory solution to what Aristotle himself calls (*Met.* B 4, 999a24-25) the "most intractable of all problems as well as the one most needing examination". There can be no abstraction indeed without a previous intuitive knowledge of what is essential.

The subsequent discussion of the Platonic Forms (1040a8-27) clearly testifies to Aristotle's usual semantic approach. Since the definiens of the Form, it is argued, consists of names (ὀνόματα), which must be not newly coined but established appellations applying to all instances denoted (κοινά),<sup>238</sup> therefore they must also fall to something other than the Form. For instance, if anyone wants to define you, he would call you an animal which is lean, or pale, or something else which will also apply to others than you. This even holds, Aristotle argues, in case of a (what we moderns call Russellian) 'definite description', since even the components of the definite description are each common to other things. Anyway, every Form can be partaken in by a plurality of particulars.

In the next paragraph (1040a27-b2) some unique, eternal things are spoken of. Despite the fact that there is only one sun and only one moon, it would seem that they need not be affected by the main reason for not being definable, viz. the commonness of name. However, they still are undefinable, for another reason. People easily make the mistake of assigning non-essential attributes to them, which, by virtue of their being merely coincidental, do not fit in a proper definiens. In addition, essential and even proper attributes of the sun or the moon can in principle fall to another entity which may come into existence.

The chapter winds up with a question which is introduced by the conjunction ἐπεὶ elliptically used in the sense of 'by the way', to insert

<sup>236</sup> Cf. Plato, *Rep.* X, 596B7; 611D7; *Theaet.* 175A2; *Sophist* 232A5; 247D3; *Laws* I, 632E6 and XII, 965C3.

<sup>237</sup> Guthrie VI, 100-5.

<sup>238</sup> The phrase κοινὰ πᾶσιν at 1040a11 does not refer to the names being in common usage (Bostock), but their being applicable to all members of the class involved. The idea of common usage is expressed by κείμενα.

a pertinent remark as an aside.<sup>239</sup> Why, it is asked, does no one produce a definition of unique particulars like the sun or the moon (and Cleon or Socrates?).<sup>240</sup>

### 9. 75 *On commonness as alien to true ousia*

In the final chapter of this cluster (Z 16), Aristotle goes on to undermine the credentials of some other claimants for the title 'true ousia'. This time, some popular views about ousia, which were already listed in the opening lines of Z 2 (1028b8-15), are under consideration, especially the claims of the parts of living things, and the four elements, earth, water, fire, and air.<sup>241</sup> Aristotle (1040b5-16) argues that they are all only potentially subsistent entities (οὐσίαι). The basic idea in the rejection of these claims is that the parts of animals are not beings on their own and separately, and like the instances of the four elements (*this* fire, *this* piece of earth etc.), they do not form some definite one thing, and thus all lack actual oneness and subsistence.

Subsequently, the discussion becomes more serious, leading up to a scrutiny of the idea of oneness together with its twin notion 'being'.<sup>242</sup> The reason for this shift of attention may be that although their lack of oneness and definiteness nullifies the claims of the parts of animals as well as those of the four elements, at first glance this may seem to corroborate the chances of oneness itself, and in its wake its twin partner, being-ness. Incidentally, the latter seems to be the true applicant *par excellence*, seeing that οὐσία, which is under investigation throughout the *Metaphysics*, is ousia taken in the sense of a thing's ontic cause or principle ('beingness'). However, the

<sup>239</sup> For this use of ἐπεὶ see my *Index*, s.v. Frede & Patzig (II, 296) wrongly propose to change ἐπεὶ into ἔτι. Ross rightly says (*ad loc.*) that the question is tackled loosely, and renders (*Oxf. Transl.*) ἐπεὶ 'after all'. Van Raalte (460f.) rightly refers to *HA* V 5, 541a32 and VII 11, 587b31.

<sup>240</sup> For particulars indicated by proper names put on a par with 'this bronzen sphere' and opposed to the merely logical entities, 'man', 'animal' and 'bronzen sphere' see Z 8, 1033b24-26. Following Bostock (*ad loc.*), I delete ἰδέας from 1040b3. Or should we maintain it and take the question to mean "After all, why does not one <of the supporters of the Forms> present a definition of what it is to be a Form?". If so, there is a parallel in Aristotle's blaming (at Z 16, 1040b30-32) the Platonists for their "incapability of telling us what precisely *are* the ousiai of this kind, those imperishable ousiai, which exist over and above the particular sensible ones".

<sup>241</sup> For them being put on a par see Z 2, 1028b9-10, and Ross II, 219.

<sup>242</sup> For the twin notions 'one' and 'be' see my sections 1.64 and 9.35.

commonness of these two claimants turns out to be a shortcoming. Like 'being an element' and 'being a principle', they are both too universal and, therefore, unspecific, so that we always have to be more specific and to implement the vague notions 'one', 'being', and 'element' by specifying the respective kinds of one, being, or element. In this context, we have to remember time and again that the true ousia looked for must be πρώτη οὐσία ('immediate ontic form'), and πρώτον αἴτιον ('immediate cause') of the concrete outside thing (πρᾶγμα), instead of just some remote essence:

*Met. Z 16, 1040b16-24*: Since the appellation 'one' is assigned to things on the same footing as 'being', and the ousia of what is one is one, and things whose substance is numerically one are themselves numerically one, evidently neither oneness nor beingness (οὔτε τὸ ἓν οὔτε τὸ ὄν) can be the <true, i.e. immediate> ousia of the concrete things (τῶν πραγμάτων), just as being an element or being a principle cannot be either; rather we seek *what* the principle is so as to reduce <the thing under investigation> to something more knowable.<sup>243</sup> It is true, beingness and oneness have a better claim to be the true ousia than do principle or element or cause, yet not even these are true ousia, since nothing else either that is common to many things is true ousia; for true ousia falls<sup>244</sup> to nothing but itself as enmattered<sup>245</sup> in the thing possessing it.

The final statement calls for some comment. Bostock (229) questions the claim that anything common to many things cannot be a thing's true ousia, and supposes that this claim dates back to an earlier version, or at least is out of place here. However, what Aristotle is here alluding to is a thing's true ousia being a strictly particular form, unlike, for that matter, its universal namesake, which is nothing but a logico-semantic tool to stand for comprising things possessing formally the same ousia. Plainly, the remote and even categorially empty twin forms 'being' and 'one' must be nothing but logico-

<sup>243</sup> Note the allusion to the fact that these notions are 'empty containers'.

<sup>244</sup> Frede & Patzig (*ad loc.*, as at Z 2, 1028b8) are right in explaining the use of ὑπάρχειν as indicating that one term applies to another and, accordingly, can be used as a name to stand for it. In other words, the verb should be understood on the onomastic level, so that any idea of sentence predication is out of the question. In fact, Aristotle asserts here that the enmattered form *is* the true ousia. So the particular status of the form is again hinted at, which really explains Bostock's (229f.) uneasy feelings about this passage.

<sup>245</sup> The conjunction τε καί refers to the factual identity of the two things combined. To say that the ousia 'falls to itself' sounds rather odd indeed, but the expression seems to be used as a polar reinforcement of the preceding 'falls to nothing'.

semantic tools — mere containers, so to speak, for implementing forms.<sup>246</sup>

Another brief<sup>247</sup> argument is added, which emphasizes once more the opposition between the particular true ousia immanent in the outside things and the most common forms ‘being’ and ‘one’:

*Ibid.* 16, 1040b25-26: What is one cannot be in many places simultaneously, but what is common *is* present in many places simultaneously.

The chapter winds up with a fresh attack on the adherents of Platonic Forms, which concentrates on the closely related ideas of commonness, universality, and separateness. Aristotle begins by granting his opponents that they rightly make the Forms separate, but are wrong in supposing that what is common is a form, since a form is not in many places simultaneously, and nothing that is universally assignable can have real existence apart from the outside particulars. He goes on to give short shrift to their habit of establishing Forms by merely adding ‘itself’ to the perceptible particular forms immanent in the outside things:

*Ibid.* 16, 1040b26-34: It clearly follows <from the foregoing discussions> that nothing universally assignable (οὐδὲν τῶν καθόλου) exists apart from the particulars. But those who believe in the Forms, though they are right in making them separate — providing that they are subsistent entities (οὐσίαι) — wrongly assume that the ‘one over many’ is a form [other than just a logical tool]. The cause for their mistake is their inability to tell us what *are* the ousiai of this kind, those imperishable ousiai which exist over and above the particular sensible ones. They make them, then,<sup>248</sup> the same in kind as the sensible ones (for this kind of ousia is familiar to us), adding the epitheton<sup>249</sup> ‘itself’, as in ‘Man-itself’ and ‘Horse-itself’.

The argument is rounded off (1040b34-1041a5) with the remark that such a procedure of simply doubling and sublimating the quiddities

<sup>246</sup> The categorial emptiness of the notions ‘be’ and ‘one’ also appears from their not being genera (*Met.* B 3, 998b22-27; I 2, 1053b22-24). For εἶναι as a categorially empty notion see also *Int.* 3, 16b24-25, and my sections 1.64 and 3.37. The particular status of immanent forms is extensively discussed in my sections 9.63 and 10.71.

<sup>247</sup> In the common view, this argument runs up to 1040b30. I cannot see that b26-27 can be inferred from the preceding lines, and take b26-27 to be the opening lines of the next stage of the discussion about the Platonic Forms.

<sup>248</sup> Supply “so to speak for better or worse”.

<sup>249</sup> Ross and others are wrong in saying that ῥῆμα here simply stands for ‘word’. As nearly always in Aristotle, this term is used in the sense of ‘attributive appellation’. See my section 3.28.

abstracted from the particulars in the sensible world instead of trying to identify them in their own right, is quite inferior to the way in which we attempt to disclose the essential nature of eternal, non-sensible substances, the existence of which we have good reason to assume. In this way we would know of the stars, even if we had never seen them.

Finally, it is concluded from the foregoing discussions in chs. 13-16 that clearly (1) nothing that is universally assigned is a subsistent entity (οὐσία), and (2) no subsistent entity is a compound of οὐσίαι.



## CHAPTER TEN

### TRUE OUSIA FINALLY IDENTIFIED AS THE ENMATTERED FORM

Book H, which, as it stands in the extant tradition of the text of the *Metaphysics*, is closely linked up with Book Z, takes up the latter book's loose ends, as it were, for a final discussion, the concluding chapter of Z (17) more specifically. It once more considers the credentials of εἶδος for being the true οὐσία that is being looked for throughout the *Metaphysics*.

#### 10. 1 *The οὐσία = εἶδος thesis corroborated once more*

In the final chapter of Book Z, Aristotle undertakes to corroborate the conclusion already arrived at in the previous chapters, to the effect that a thing's ousia is its form. The fresh approach to the overall question of what precisely οὐσία is this time starts from its being a thing's 'principle and cause of some sort' (ἀρχὴ καὶ αἰτία τις).<sup>1</sup> This leads to a rephrasing of the general question in terms of asking for an explanation of a thing's being in terms of 'Why-[x]-is?' and 'How-[x]-is-constituted?'. As often Aristotle claims that you must be sure beforehand that there *is* an [x] at all, or 'that-[x]-to-be' (or '[x]'s-being') is a fact (1041a15; a24-25; b4-5).<sup>2</sup>

Firstly, the 'why-question' is articulated in order to avoid a senseless asking why [x] is [x]. It becomes clear that the question should be put in terms of 'Why does F belong to [x] (or 'to [x]-being-[x])?'. Thus the question why it thunders is to be rephrased into why there-being-a-noise befalls to the clouds:

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<sup>1</sup> Cf. *Met.* Δ 8, 1017b15 and H 2, 1043a2. At Γ 2, 1003b22-24 and Δ 1, 1013a17, 'cause' and 'principle' are equated. Their relationship naturally plays a role in the discussion of epistemonik proof in *APo*. The results of the foregoing discussions are surely not dismissed. Frede & Patzig refer (308) to parallels in *Phys.* VIII 7, 260a20-21, *EN* VI 3, 1139b14; VII 1, 1145a15; *EE* II 1, 1218b31; II 6, 1222b15.

<sup>2</sup> In *APo.* II, 10 this claim was about identifying the object [x] of your epistemonik proof as satisfying a certain definiens. My sections 6.53-6.58.

*Met. Z* 17, 1041a10-20: The 'why question' is always put in this form: 'why does one thing fall to another?' For to ask why an educated man is an educated man is either to repeat the inarticulated subject matter,<sup>3</sup> namely to ask why the educated-man *is*,<sup>4</sup> or it is something else. Now, 'why a thing is itself', is a senseless inquiry; for that there actually is a certain state of affairs (τὸ ὅτι καὶ τὸ εἶναι) must be clear beforehand (ὑπάρχειν δῆλα ὄντα)<sup>5</sup> — I mean, for instance, *that* the moon is eclipsed — but that-a-thing-is-itself, such an explanatory statement is a *passee partout* for all cases, viz. why a man is a man, or why an educated-person is educated — unless perhaps someone will assert that each thing is inseparable from itself, which means, as we have called it, its being one; this explanation, however, applies to everything alike, and is too easy a way to deal with the question.

Bostock (238) thinks Aristotle offers a very odd explanation of why questions about a thing being itself would be pointless, namely that before one can ask why something is the case one must already know that it is the case. However, he seems to ignore the important role of the distinction made by Aristotle in the *Posterior Analytics* (II 1, 89b24ff.) between the ὅτι ἔστι and the εἰ ἔστι questions. Aristotle's explanation of this distinction is not, as Bostock takes it, "for before we can ask *why* something is the case one must already know *that* it is the case". Aristotle actually means that if we try to explain a certain state of affairs (indicated by the phrase τὸ ὅτι, i.e. a substrate having a certain attribute) that we are familiar with by sense-perception, we must know whether (εἰ ἔστι) the substrate can be defined as satisfying a certain intermediary definiens which will serve for 'middle'. Hence to understand Aristotle's intention is surely not a matter of conjecture, as Bostock holds it to be.<sup>6</sup>

<sup>3</sup> My (interpretative) rendering of τὸ εἰρημένον ζητεῖν. The rendering (Ross, Frede & Patzig; Bostock) "to ask, as we have just said," (where?) is beside the point, it seems. Aristotle is offering his readers the choice between two options, either to analyse the thing spoken of (τὸ εἰρημένον), or to refrain from articulating it into [x] and F. For this use of εἰρημένον cf. τὸ ζητούμενον = 'the thing searched' at a26 and 33, and τὸ λεγόμενον (at *APo.* II 7, 92b23), meaning 'the content of a definiens'. This is also the interpretation suggested by ps.-Alexander and Bonitz; see Ross *ad loc.* For such renderings in general see my section 1.71.

<sup>4</sup> Joachim's supplying (*ad loc.*) μουσικὸς ἄνθρωπος is quite understandable.

<sup>5</sup> For this rendering of ὑπάρχειν see my section 1.53.

<sup>6</sup> Likewise, Bostock's (242-4) comments on 1041a32 seem to miss the point. For an analogous misunderstanding on his part of *APo.* II 8 see *ibid.*, 218.

*Ibid.* 17, 1041a20-26: But one could also ask<sup>7</sup> why a man is such a kind of animal; clearly, this differs from merely asking why one who is a man is a man. So what one asks is why it is that one thing belongs to another. (That it does belong is evident; otherwise the inquiry is about nothing). Thus one may ask *why* it thunders, for <this boils down to asking> why a noise is produced in the clouds, i.e. the thing under examination is a case of 'one thing said of another' (ἄλλο κατ' ἄλλου).

Thus Aristotle believes that two of the four questions that, according to *APo.* II 1, are vital to any epistemonical proof, are settled: the *that* question and the *whether* question. The two others remain to be answered: the 'what-it-is' (τὸ τί ἐστὶ) and the 'why-it-is' (τὸ διότι). They are under discussion now.<sup>8</sup> What one is after is the cause or explanatory account of a thing's being so-and-so, and that is its quiddity, expressed by its definiens, to say it in abstract terms (a 28: ὡς εἰπεῖν λογικῶς). It is underscored again that the object under inquiry is most easily overlooked in cases in which it is not analysed, and we keep designating it by a single term, like 'man', instead of indicating that it is in fact a whole made up of certain constituents. The requirements for analysing the object into its essential constituents by framing its definiens, instead of just naming it by a single term and leaving it at that, clearly parallels the discussion found in *APo.* II 1-2: there the distinction between an unanalysed object and the object qua split up into the object qua taken by itself and its attribute likewise comes to the fore as important for framing the correct epistemonical procedure. Notice that the term ἀπλῶς significantly occurs in our passage as well as in *APo.* II, 1-2, where it is found no less than nine times, and explicitly explained in terms of the object's simple designation (ἀπλῶς) by means of a single term referring to the mere ὑποκείμενον (90a12-13). In Z 17 the text runs as follows:

*Ibid.*, 17, 1041a32-b4: The thing under inquiry most easily escapes our notice in cases in which not one thing is said of another,<sup>9</sup> e.g. when it

<sup>7</sup> This is the other option alluded to by the phrase ἢ ἄλλο (at 1041a14), in which the object under examination is analysed into its constituents. Frede & Patzig athetize this phrase which is found in all our MSS., as well as in Asclepius (CAG VI-2, p. 449<sup>25</sup>) and ps.-Alexander (CAG I, p. 539<sup>12</sup>). Owen's (1978-9, 15) conjecture ἢ ἄλλως instead of the manuscripts reading ἢ ἄλλο, which grammatically nicely matches εἰρημένον, is unnecessary.

<sup>8</sup> Frede & Patzig II, 311f. For my interpretation of the phrase τὸ ὅτι καὶ τὸ εἶναι (at 1041a15) see my comments on *APo.* II, 1-2, where the two items are also closely related, in a similar way as the two others are which bear on a thing's cause and quiddity; my sections 6.51-6.52.

<sup>9</sup> I.e. in which there is no expression composed of a name and an attribute. For

is asked 'What is a man?', owing to the fact that the question is put by using a simple term (ἀπλῶς), instead of itemizing it in terms of 'this is *that-and-that*'<sup>10</sup> (ὅτι τὰδε τὸδε). But we must ask the question in an articulated form,<sup>11</sup> otherwise we shall have something which shares the character of what is both a genuine and a pointless inquiry.

Next, the 'this-is-that' ('this-belongs-to-that') formula is implemented by explaining the precondition of facticity, i.e. of there actually being something to which something else belongs, in terms of some matter receiving a (further) determination, which is the form. And as in the previous chapters, this form (εἶδος) is identified as the true ousia:

*Ibid.* 17, 1041b4-9: Since we must safely know<sup>12</sup> that to actually be falls to the thing, clearly it is the matter<sup>13</sup> of which one asks owing to what it is some definite thing. For instance, the question may be 'Owing to what are these things here a house?' (and the answer is 'Because what is <expressed by> the definiens of house<sup>14</sup> belongs to them'); or it may be 'Owing to what is this thing here a man?', or 'Owing to what is this body thus<sup>15</sup> affected a man?' So what is sought is the cause,<sup>16</sup> being the form, owing to which the matter is so-and-so. Now this is the ousia.

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the phrase κατ' ἀλλήλων in the sense of 'one of another (instead of 'of one another') see my *Index*, s.v.

<sup>10</sup> This phrase is emphasized by the word order in Greek. Note that in Aristotle the demonstrative nouns τὸδε and τοῦτο are often used to indicate (as a dummy term) mere determinateness or individuality, rather than to denote this or that actual thing; e.g. *Met.* M 3, 1077b22 and 35. Bonitz, *Index*, 495b33-43.

<sup>11</sup> The idea that a notion's articulation is required for our having a clear concept of something is also found at *Met.* A 5, 986b5-7; 8, 989a32, and B 6, 1002b27. Note also Aristotle's famous remark at the end of *Phys.* I 1, (184a23) that to have real knowledge of something, one should first bring up that thing under an articulated expression (such as a definiens), instead of a general, unspecific name. If not, we are like children, who call every man 'father' (and every woman 'mother'), until they learn to analyse these concepts and see that the determinant 'who-has-generated-me' added to 'man' should be subtracted from 'father' (= 'man who ... etc.'), so as to leave only the notion 'man' applying to other men. The requirement of conceptual articulation finds its counterpart in Aristotle's view that where the required articulation is lacking, one is able (and obliged in a way) to gather the *sensus plenior* out of what is actually said, by means of 'creative interpretation'. How Ancient authors dealt with creative interpretation is put by Mansfeld in a broader context (1994), 149-61.

<sup>12</sup> My rendering of ἔχειν, reading, with Asclepius and the Laurentianus, καί instead of the odd reading τε καί.

<sup>13</sup> *Pace* Ross (*Oxford Translation*), τὴν ὕλην is laid emphasis upon (by prolepsis), not the why-question.

<sup>14</sup> Lit. 'what it was for a house to be'; for the use of the *imperfectum philosophicum* see my *Index*, s.v.

<sup>15</sup> Reading (at b7), with Frede & Patzig (317), who are also followed by Bostock, ὡδί instead of τοδί found in the MSS.

<sup>16</sup> There are good reasons to delete the subsequent words τοῦτο δ' ἐστὶ τὸ εἶδος (at 1041b8) as a gloss; Frede & Patzig, II, 317f.

This once again brings Aristotle to speak of the importance of ruling out the use of simple terms like ‘man’ instead of the more informative articulated phrases such as ‘two-footed animal’. By the same token, the nature of the compound thing as expressed by such phrases, which serve as the definiens of the things indicated by the simple terms, comes up for discussion.

The subject of choosing correct labels (‘correct categorization’) for the things under investigation is now addressed in a somewhat broader context. It is inferred from the foregoing discussion (1041b9-11) that in the case of simple things (ἐπὶ τῶν ἀπλῶν) any inquiry and explanation are impossible — that is to say, any inquiry which could lead to a genuine epistemonical proof and its exposition in the shape of a syllogism cannot be accomplished, and, therefore, an alternative procedure should be undertaken. Aristotle’s shift from speaking of the correct semantic way in which the object is to be called up for examination and epistemonical proof, to his dealing with the things as signified by the required designations (viz. the one using complex expressions of the ‘subject *plus* attributes’ type) is invested in the ambivalent meaning of the phrase ἐπὶ τῶν ἀπλῶν. The ἀπλᾶ still are things called up by simple expressions (διὰ τὸ ἀπλῶς λέγεσθαι) and, accordingly, opposed to the things which something else is attributed to; but by the same token, they are now considered as an ontic compound. After merely referring to an alternative method required for addressing the unanalysed things as signified by single terms,<sup>17</sup> Aristotle immediately continues the discussion of compound articulated things and the way in which these compounds form a genuine (quidditative) unity. By doing so, he takes up the previous discussion (in Z, 12) of the unity of a thing’s definiens.<sup>18</sup>

Now the compounds intended in this context — things, that is, that form a genuine unity, and not an aggregate — are such things

<sup>17</sup> The discussions found in *Met.* E, 4, Θ 10, 1051b17-1052a4, and *An.* III, 6 are here alluded to. In *APo.* II 19, Aristotle explains how to gain knowledge of ‘simple things’.

<sup>18</sup> I purposely say (as I always do) ‘definiens’, not ‘definition’. Bostock has rightly observed (244) that it is more probable that Aristotle is thinking (at 1041b9-12) of simple and complex items, not of propositions. To understand Aristotle’s semantic approach we should have in the forefront of our attention that ‘appellation’, not sentence predication is in order, and that, accordingly, complex expressions are composite terms (incomplete assertibles), not sentences. See also my interpretation of Aristotle’s apophantics dealing with statement-making utterances taken as assertions of monadic expressions, not ‘S is P’ construals; my sections 1.51 and 2.12-2.16.

whose matter is not just a combination of different materials. Unlike aggregates, genuine unities need a combining agent, which is of an order different from the things combined; for otherwise an infinite regress of factors of the same order cannot be avoided. Now this agent is the form. Thus Aristotle again arrives at the form as primary cause of a thing's being precisely *this* or *that*. The present section (1041b9-33) once more assesses the unique position of 'this something else', identified as the thing's εἶδος = οὐσία and the cause-and-principle being active in the essential constitution of things, by opposing it to material elements:

*Ibid.* 17, 1041b25-27: It would seem, then, that this 'something else' is some definite thing, not merely an element; and that it at least (γε)<sup>19</sup> is the cause of this thing here being flesh and that thing there being a syllable; and similarly in other cases. And this is the ousia of each thing, because it is the primary cause of its being.

These lines clearly do more than just summarize the foregoing discussion. They also seem to imply that for the respective elements too, to be, the εἶδος is the primary cause, so that some parcel of matter being flesh is also due to the εἶδος 'flesh' being active as an immanent principle in it.<sup>20</sup> We should note in passing that the form qua (ontic) combining agent of the material components is at the same time at the basis of the (logical) unity of the definiens.

The concluding section of this chapter (1041b28-33) expressly affirms the causative role of the *eidos* for natural subsistent beings, i.e. things that are constituted by a natural process and in accordance with their nature. Their nature, it is said, is their true ousia,<sup>21</sup> not merely one of their constitutive elements, but their principle; the elements are only found on the material level.

## 10. 2 *A further assessment of matter as 'material constitution'*

The opening chapter of book H (1042a4-24) begins by a summary of the contents of Book Z, which makes no reference to Z 7-9. For the rest, the summary is actually one *ad sensum*.<sup>22</sup> It winds up with the

<sup>19</sup> For the emphasis expressed by γε in terms of limitation see Van Raalte (1993), 178; 339; 551.

<sup>20</sup> The primary ousia being a thing's primary cause is also found at *Met.* Δ 8, 1017b15-16, and H 2, 1043a2-3.

<sup>21</sup> Frede & Patzig II, 323.

<sup>22</sup> For the composition and contents of the summary see Ross II, 226f.; Bostock,

proposal to further investigate the “agreed ousiai, which are those that are perceptible; and all perceptible ousiai have matter” (1042a24-26).

In the previous discussions, the identification of οὐσία with a thing's form (εἶδος) had forced matter (ὕλη) into the background, because it could not meet the main requirement for truly being ousia, viz. the capability of separate existence and being a ‘this’ (Z 3). The purport of the remainder of the chapter is to return our attention to an aspect of true ousia that was already highlighted in Z 3 (1029a1-5), but bound to vanish into the background owing to our preference for the form, to wit, its being ‘underlying thing’ (ὑποκείμενον). The counterbalance is achieved by a renewed investigation of matter, which may be considered the underlying thing *par excellence*. However, as in Z 3, the hypokeimenon character is not denied to the other former claimants for the place of honour, namely the form (εἶδος) and the composite of form and matter (τὸ σύνολον). Notice that the subsequent statements are made from the angle of ‘this-ness’ and the capability of separate existence, and that, unlike the discussions in Z, the credentials of matter are somewhat upgraded now by introducing the notion of ‘at least potentially being a *this*’:

*Met.* H 1, 1042a24-31: Let us now resume the examination of the agreed ousiai. These are the perceptible ones; and they all have matter. What underlies is ousia.<sup>23</sup> In one way this is the matter (and by ‘matter’ I mean that which is not a *this* in actuality, but potentially); in another way it is the form expressed by the definiens (ὁ λόγος καὶ ἡ μορφή), which, while being a *this*, is logically separable; and in a third way it is the compound of these two. The last alone can come to be and cease to be, and is capable of separate existence without qualification (χωριστὸν ἀπλῶς); for of the ousiai expressed in a definiens some are separable, others are not.

Ross (II, 227) thinks that by the “others that are not separable” in the last sentence only νοῦς can be intended, and he refers to *Met.* Λ 7 and 9, and *An.* II 2, 413b24, III 4, 429b5 and 5, 430a22. On that interpretation, this sentence is merely a loose remark. It seems better to take it as a reference to Z 11, where the problem was discussed whether or not the matter of natural things should be included in their definiens. In our discussion of this passage, we came to infer

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248-50; Burnyeat (1984), 1f.

<sup>23</sup> The notion of hyparxis is here predominant.

that Aristotle recognizes two types of *definiens*, one presenting a 'formal significate' and referring to the thing's form or quiddity, the other indicating this form together with its material constitution taken generally, i.e. its 'material' or 'total' significate.<sup>24</sup>

For the same reason, Bostock's interpretation should be rejected. He claims (250f.) that since Aristotle (1042a30) says that it is *only* the compound that is submitted to generation and corruption, the matter that he is talking of should be prime matter ('*materia prima*'). He presumes some support for his surmise in the next paragraph, in which it is stressed that matter underlies by persisting through change. However, what persists, formally, is the general condition of material constitution and, physically, the successive parcels of matter in which this general condition of 'materiality' takes shape.<sup>25</sup>

Other interpreters have hardly made a stronger case on this score. In the collective notes to Z and H, the gremium of London scholars<sup>26</sup> rightly complain about the negligent and somewhat obscure composition of the summary in H 1. However, to suggest that the hard work on essence (of Z 13ff.) has now disappeared from Aristotle's memory, and likewise the conclusion of Z 17, is carrying things a bit too far.<sup>27</sup> On the assumption that, from Z 11 onwards, matter's case had become the case of 'material constitution', which *is* susceptible of being included in a proper *definiens*, there is no good reason to think that the important outcome of Z has faded away from the author's memory.

In the remainder of the chapter (1042a32-b8), matter's case, that is to say, the case of the condition of materiality falling to natural things, is corroborated. Since in all changes (local, qualitative, and even substantial) from one opposite to the other there is something which underlies the change, Aristotle observes, it is evident that matter too is *οὐσίᾱ*. As for a change of substance, the vital role of matter is obvious, because matter is that which now underlies as a *this* and later underlies by way of privation, meaning that what underlies

<sup>24</sup> For these terms see my *Index*, s.v. 'significate'.

<sup>25</sup> That the tradition of ascribing to Aristotle the notion of an utterly formless matter, called 'prime matter', is mistaken has been argued for successfully by Bemelmans (1995), who offers an alternative interpretation of the phrase *πρώτη ὕλη* (in so far as it occurs in Aristotle at all) in terms of a 'formal entity', and in the context of focalization and categorization. See my sections 12.37-12.39.

<sup>26</sup> Their thorough study of these Books has been published by Burnyeat (1984).

<sup>27</sup> Burnyeat (1984), 1.



or undergoes destruction is matter qualified by a positive form, while what underlies generation is matter qualified by a privation.<sup>28</sup>

### 10. 3 *On form, differentia, and actuality*

The next two chapters aim to assess the position of matter's counterpart. It must strike the reader that this counterpart is not identified straightforwardly as the form (εἶδος) until 1043a19-21, but first brought up as something that actualizes matter, which has just been described (1, 1042a27-28) as that which is only a 'this' potentially. Notice that, unlike the first six chapters of *Z*, the claimants 'matter' and 'form' are no longer played off against one another, but in line with the outcome of *Z* 12-17, and are now dealt with as the compound's constituents in their own right.

First, Aristotle links up the present discussion with the foregoing, saying (1042b8-10) that since the (potential) component 'materiality' is now sufficiently recognized, we have to explain the nature of that which is the ousia of perceptible things in the sense of actuality (τὴν ὡς ἐνέργειαν οὐσίαν). In the wake of Democritus, the actualizing agent is introduced as differentia (διάφορα), but while Democritus (thinking of atoms) only knew of three geometrical differentiae — shape, position, order<sup>29</sup> — Aristotle accepts no such limitation on the kinds of differentiae and claims that their number is far greater. As Bostock (254) has well observed, the author opens with a list of the several ways in which a thing's material ingredients may be combined, which has something in common with the idea of *Z* 17 (1041b9ff.), that a compound's form is the way in which its constituents are arranged so as to make a (coincidental or essential) unity out of them (1042b11-24).

Aristotle's extended list of differentiae itemizes a lot of physical ways in which things may be constituted. Again, the list is hardly exhaustive. The next paragraph is intended to draw our attention to what should be viewed as the principles of things' being, as we will be told at 1042b32-33, and so it raises the subject to the metaphysical level by reducing the problem of the identification of the manifold 'differentiae' (διάφοραι) to distinguishing the different ways in which

<sup>28</sup> Ross II, 227.

<sup>29</sup> Cf. Aristotle's report in *Met.* A 4, 985b4-20.

the notion 'be' or 'is' is implemented. Owing to this move the differentiae will turn out to be the distinctive 'somehows' owing to which beings *are*<sup>30</sup> a *this* or a *that*. It is stated (1042b25-31), then, that 'be' (τὸ ἔστί, τὸ εἶναι) assignable to a thing is used in as many senses as there are differentiae, somehow actualizing the condition of materiality, whether this happens by positioning (threshold), solidification (ice), or a mix or blend of them (hand or foot).

Aristotle's account of the being of different things should be considered bearing in mind that such differentiae are each ἄτιον τοῦ εἶναι (1043a3) of things. This will enable us to uncover the structure which, when transferred to real ousiai, can put us on the track of the differentiae, in the proper sense, that are the object of our search.<sup>31</sup> It appears that where matter and potentiality are different, the actuality and the form expressed by the definiens likewise vary. That is why some define a house from the angle of its material constitution, saying that it is stones, bricks, and timber, which materials disclose what is potentially a house. Others, focussing on the actuality of the house, call it a receptacle to shelter people and their property in, while others again combine these two descriptions and define a house as a combination of these properties (1043a2-19). Aristotle then proceeds to assess the various ways of defining things from the angle of the distinction between potential and actual ousia, which is predominant throughout the present chapter:

*Met. H 2*, 1043a19-28: The definiens framed from the differentiae appears to be a definiens of the form and the actuality (τοῦ εἶδους καὶ τῆς ἐνεργείας),<sup>32</sup> while the definiens of the immanent constituents is rather a definiens of the material constitution. [...].<sup>33</sup> From what has been said, then, it is plain what perceptible ousia is, and in what way it is, one kind of it as matter, another as form and actuality (μορφή καὶ ἐνέργεια), while the third is the compound of these two.

<sup>30</sup> Bostock (255-7) gets himself into quite a bit of trouble by taking the 'is' specifically as the 'is' of existence. Cf. Owen (1965), 82.

<sup>31</sup> See Burnyeat (1984), 6-8, who rightly remarks (8) that, methodologically, the whole chapter is an example of Aristotle progressing from things familiar to us (γνώριμα ἡμῖν) to things known by nature (γνώριμα τῇ φύσει).

<sup>32</sup> The καὶ should be taken to be an explicative connective so as to make the rendering 'the actualizing form' most appropriate.

<sup>33</sup> In an aside omitted here Aristotle remarks that the definitions which Archytas, a famous member of the Pythagorean school and a contemporary of Plato's, used to approve, were of the latter sort.

10. 4 *Again, the problem of defining things properly*

Chapter 3 is usually regarded as containing three ill-connected parts.<sup>34</sup> In my view there is a reasonable line of argument, which, as often, is only interrupted by a footnote-like aside (1043b14-23). Its general subject matter is the problem of definition broached earlier (from Z 10 onwards), including the unavoidable suggestion that there might be two kinds of definiens, one signifying the thing's form, the other indicating the compound including its material constitution. This is now applied to the 'matter-potentiality' *versus* 'form-actuality' thesis.

The discussion begins with an important semantic exposition, which in fact is an application of one of the semantic Main Rules frequently at work before.<sup>35</sup> The author reminds us (1043a29-37) of the ambivalent meanings of names, because they may stand either for the compound (τὴν σύνθετον οὐσίαν), or for the form and actuality (τὴν ἐνέργειαν καὶ τὴν μορφήν). For instance, you have to establish whether by 'house' a 'shelter made from bricks and stones placed thus' (i.e. the compound thing) is intended, or just the actualizing form 'shelter-hood'; and whether 'line' stands for a concrete 'two-dimensional quantity', or the form, 'two-dimensionality'.<sup>36</sup> Likewise, 'animal' may be used both in the sense of 'concrete animal' and in the sense of the form, 'animal-hood', although not qua something named by one and the same definiens, but in its being related to one focal meaning.

Aristotle is obviously alluding to the two kinds of definiens, one indicating a thing's quiddity without the matter it inheres in, the other the quiddity including its material constitution.<sup>37</sup> Remarkably, his recalling the ambivalent meaning of names is followed by the remark (1043a37-b4) that, though an appropriate telling apart of these meanings is of importance for other purposes, it is not relevant for the examination of perceptible ousia: because when seeking the form as such of a composite thing (as we are actually doing now), we *eo ipso* are focussing on the quiddity without matter. For instance, to

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<sup>34</sup> Ross (II, 231) calls this chapter "a collection of ill-connected remarks on various topics relating to essence and definition". Though Bostock speaks of "three quite unconnected parts" (261), yet he recognizes (267) "the overall structure of this chapter (from 1043b4, and omitting b14-23)".

<sup>35</sup> Namely, RMA (my section 1.71).

<sup>36</sup> Cf. Z, 11, 1036b 14-17.

<sup>37</sup> Cf. Z, 10, 1035a6-9 and 16-25.

establish what precisely man's form — soul — is comes to identifying 'soul' and 'soul's essence'. The problem of ambivalence only lurks where the composite's name, 'man', is concerned; for 'man' and 'man's essence' are not the same.

Next, the question concerning the form dwelling in compound things will be dealt with in terms of the old problem (Z 10-12; 17) of the unity of the definiens. Aristotle first refers to the example of the syllable BA, used before (Z 17), where it was said that it is not just two letters B and A, but also 'something more', referring to their arrangement, which is not itself a further component of the syllable, as an agent of the same order as the two letters. He now goes on to state that this arrangement, whether it is 'combination' (σύνθεσις)<sup>38</sup> or 'mixture' (μίξις), qua second-order agent, is so special that it should be contrasted with the material components, which are taken together as if they were merely one ingredient. This boils down to stating that the second-order agent's job goes beyond just combining or mixing the ingredients and is actually the ontic cause or principle owing to which a thing (syllable or threshold, using Aristotle's examples) *is*. It cannot come as a surprise that the syllable-threshold example is readily extended to Aristotle's favourite example of the quidditative unit, 'two-footed animal':

*Met.* H 3, 1043b4-14: On investigation, it appears that a syllable is not composed of the letters *plus* their combination, as a house is not bricks *plus* combination. And correctly so; for the combination and the mixture do not themselves follow from the things being mixed or combined, and the same holds of all other cases. For instance, if the threshold is characterized by its position, the position is not caused<sup>39</sup> by the threshold; it would be better to say that the threshold is caused by the position. Nor, clearly (δὴ), is a man animal *plus* two-footed. If these are the matter,<sup>40</sup> there must be something over and above them, something which is not an element and not a product of elements, but the ousia; and when people eliminate this <agent, viz. ousia> they speak only of material constitution. If, then, this is the cause of man's being, and this is the ousia, they will be failing to state of all things the ousia!

<sup>38</sup> Cf. Aeschylus, *Prometheus*, 459-60, where Prometheus says that he has invented for mankind "counting, the primary skill, and how to set down characters in writing (γράμμάτων τε συνθέσεις)".

<sup>39</sup> For this sense of ἐκ see Liddell & Scott, *s.v.* III, 6. Notice the use of αἴτιον at 1043b13. Both the puzzle raised by Burnyeat (13f.) and the one discussed by Bostock (263) are due to their failing to observe this.

<sup>40</sup> For indicating the counterpart of the differentia or form as 'matter' cf. *Met.* Δ 28, 1024b8; Z 12, 1038a6 and 19.

Notice that the subtle importance of the form is emphasized by using the cases of syllable and threshold as illustrations. The world of difference, so to speak, between BA and AB entirely depends on the arrangement of these letters, and whether a piece of stone is a threshold or a lintel hinges on its being put under or above the door.<sup>41</sup>

In the subsequent parenthetical paragraph, the eternal nature of the form as ontic principle is discussed (1043b14-23). The position of this paragraph in H 3 is somewhat bewildering, but should be judged in the framework of the general arrangement of the treatises making up our text of the *Metaphysics*.<sup>42</sup> Anyhow, it also offers a controversial item from the doctrinal point of view. The crucial question is whether or not the Aristotelian *eidos* is imperishable. Speaking about the forms of artefacts like 'house', Aristotle asserts that they are not capable of separate existence and, accordingly, are never found apart from their particular instances (b20: *παρὰ τὰ τινά*).

Aristotle starts by stating this alternative: the *ousia*-form must *either* be eternal *or* come to be and cease to be without ever actually being itself involved in the process of generation or corruption. Bostock (264) aptly paraphrases: "What Aristotle means is that the *present* tense 'it is coming to be' or 'it is ceasing to be' is never applicable to it, though the *perfect* tense 'it has come to be' or 'it has ceased to be' is so applicable"; and refers to *Met.* B 5, 1002a32-b11; H 5, 1044b21-22, and *Cael.* I 11, 280b26, where contacts, points, and temporal instants are mentioned as also meriting this description, since, while being indivisible, their coming to be and ceasing to be cannot take time. Cf. *Phys.* VI 5, 235b30-236a7 *juncto* 4, 234b10-12. Analogously, a form has no material parts, as may be gathered from Z 8, and so it is not itself a matter-form compound. On the other hand, as has been made clear and explained earlier (Z 8), no one creates or produces the form; it is the individual that is made, and so it is this compound of form and matter that is involved in the process of coming to be (1043b14-18).

So much for generation. As for the closely related issue of the form's imperishability, it surely does not follow that because they are not involved, here and now, in any actual *process* of generation or

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<sup>41</sup> Otherwise Latin 'limen', which is also used to stand for both 'threshold' and 'lintel' (hence 'sublimis' = 'situated high up'). Elsewhere too Aristotle claims that in defining composite things, the kind of composition should be clearly observed. E.g. *Top.* VI 13, 150b22-26; 14, 151a20-32; *Phys.* I 5, 188b9-21.

<sup>42</sup> Ross II, 232; Burnyeat (1984), 15-7; Bostock, 265f.

corruption, the ousiai of perishable things should themselves be imperishable and capable of separate existence (independent of matter, that is). The only thing that is clear, Aristotle asserts, is that some of them are not capable of separate existence, which is exemplified by an unmistakable case, viz. that of the artefact 'house'. But perhaps, he goes on, such artefacts<sup>43</sup> are not even entitled to the name οὐσία, as nothing is which is not formed by nature. One might well hold that the only ousia to be found in perishable things is their nature (1043b18-23).

This raises the question what to think of the forms of natural things. The passage is not explicit on this score. The answer largely depends on what the status is of enmattered forms. If they are particular (individual), it is most reasonable to assume that they are perishable. Or rather, they may be assigned what is called 'Heraclitean eternity', because on Aristotelian doctrine, "one (particular) man begets another" (*Phys.* II 1, 193b8): that is to say, one man succeeds another without any single entity, whether form or compound, enduring. Apart from this, there are solid reasons to argue for the particular status of enmattered forms.<sup>44</sup>

The next paragraph (1043b23-32), which is introduced by 'consequently' (ὥστε), takes up the problem of definition from 1043b3-14. It first discusses the opinion of the followers of Antisthenes that any use of a proper definiens, grasping a thing as what it precisely is, is impossible. We should be reminded of what Aristotle said in the *Lexicon*, Δ 29, with regard to Antisthenes himself: as we have seen before (8. 42), Aristotle attacked his naïve view that it is impossible to assign to a thing an account other than its name or proper account consisting of the names of its simple constituents. The Antisthenians, then, concluded from this that any definiens cannot be but a 'long rigmarole' (μακρὸς λόγος),<sup>45</sup> owing to the fact that to describe a thing

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<sup>43</sup> Bostock (265) is certainly wrong in claiming that Aristotle tentatively suggests that we should not count the form of a house as an ousia; for Aristotle is speaking of artificial compounds, not of their forms. This is patently clear from the use of the verb συνέστηκεν at 1043b22, which can only be used of a compound. Cf. at Z 17, 1041b29-30, where likewise there is talk about ousiai that are composed naturally and in accordance with their nature (κατὰ φύσιν καὶ φύσει συνεστήκασιν). There are frequent allusions in Aristotle to the privileged position of *natural* things when it comes to philosophical investigation. See my *Index*, s.v. 'natural'.

<sup>44</sup> My sections 9.63 and 10.71.

<sup>45</sup> This is an allusion to Simonides, fragm. 189 Bergk, where the phrase is used for an evasive story such as slaves are accustomed to tell their masters in order to cover up their failure in some duty.

by a pertinent expression, which is not just the thing's name, one could only take refuge in qualifying an alternative expression (which, in principle, is applicable to other things, too), by so many determinations that it precisely denotes *this* thing, e.g. by calling Socrates 'the bald, bearded, henpecked husband' etc. Since this would be an endless enterprise, you can only explain the thing by saying what it is like, e.g. by calling silver 'something like tin'. Burnyeat rightly takes this procedure in terms of naming and elucidates it by remarking (1984, 18) that the 'like tin' designation "could be an (imperfect) instrument for getting someone to attach the name 'silver' to the right thing".

To understand Aristotle's next remark that, in a way, the Antisthenians "have a point here" one has to go back to the last sentence of the paragraph just before the parenthesis of b14-23. At 1043b10-14 it was stated that if animalhood and two-footedness were to be the generic 'matter',<sup>46</sup> there must be something over and above them, something which is the agent 'ousia-form'. And when people eliminate this agent, they state only the material constitution, and will thus fail to state the thing's ousia. Now this failure readily reminds us of the Antisthenian attack on our common practice of defining, which they are in the habit of deeming a 'mission impossible'. On the Antisthenian line of thought, one could really say scornfully that, by leaving out the unifying agent — the form — those people offer nothing more than a collection of ineffectual, unarranged single words, which comes close to an impertinent, insubstantial, so to speak, rigmarole. Of course, Aristotle's remark about the framers of inefficient definientia holds a great deal of mockery, meaning something like: "fancy having that flung at you, that those uneducated people could make a point against your malpractice, when it comes to properly defining and designating things."

Next he proceeds to draw the helpful conclusion:

*Ibid.*, 3, 1043b28-32: So of one type of ousia, namely the compound one, a definitorial account (ὄρον καὶ λόγον) can be given — whether they be perceptible or intelligible — but of their elementary<sup>47</sup> constituents this cannot be done, since a definitorial account (ὁ ὅρος ὀριστικός) expresses an attributive relationship between something

<sup>46</sup> For this use of ὕλη see my *Index*, s.v.

<sup>47</sup> For the sense of πρῶτος with the connotation of ἀρχή see Bonitz, *Index*, 652b35-40.

and something else,<sup>48</sup> one of which playing the part of matter, and one of form.

Bostock (267) has correctly observed that in this passage Aristotle draws a moral, apparently both from this Anthisthenian-like puzzle and from his own puzzle about man being two-footed *plus* animal (1043b10-14), that a definiens must always have the 'thing *plus* attribute' form. However, Bostock is of the opinion that the thesis that it is only the compound of form in matter that is definable, neither form taken by itself, nor matter alone, is quite at odds with the bulk of Z 10, with Z 6 as summarized at Z 11, 1037a33-b7, and with Z 4, 1030a7-14, though it is entirely in accordance with what was claimed in H 2. For unlike, or rather opposite to H 2-3, it was claimed in Z that it is only the form that is definable, and that the compound is not.

The discrepancy envisioned by Bostock disappears, once we remember the important distinction we have been arguing for between two kinds of definiens, one of the sole form, one of the form as enmattered. Whenever Aristotle opposes a thing's form to its matter and leaves the thing taken as compound of form and matter out of consideration (as is often the case in the Z passages), he *eo ipso* thinks of defining a thing's quiddity irrespective of its actually being enmattered, while in H, on the contrary, the form qua enmattered, i.e. including its material constitution, is under examination. This shift of attention need not surprise us. The lengthy consideration of all the ins and outs of the form-matter relationship has, as early as in the concluding chapter of Z (17), resulted in a hard-won outcome: if the form (εἶδος) is *the* claimant for the title 'true ousia', any Platonic thought of transcendence can only be expelled precisely by taking the *eidos* as the *enmattered* form, and, consequently, by recognizing that a definiens of the thing the form inheres in must include the thing's material constitution.<sup>49</sup>

In the last paragraph (preceding the concluding statement of the chapter, 1044a11-14), Aristotle presents another illustration of the peculiar position of ousia being, at the same time, some one thing and a unit of a plurality (duality) of constituents. To bring out this

<sup>48</sup> Literally, "means (or indicates) something about something" (τὸ κατὰ τινὸς σημαίνει). For this procedure, my section 2.11.

<sup>49</sup> As early as at Z 7, 1033a1-5 and 8, 1033b24-26, and even in E 1, 1025b30-1026a6, the second kind of definiens, the one including material constitution, is found.



ambivalent feature the comparison of ousia with ἀριθμός is, Aristotle takes it, most suitable. But his exposition seems to be a bit obscured as a result of the intermingled criticism of Pythagoreans and Platonists.

A correct understanding of Aristotle's view of ἀριθμός is a preliminary requisite. After discarding (1043b32-34) any incorrect way of placing οὐσία (taken as the compound thing or σύνολον, as in the previous paragraphs) and ἀριθμός on a par, four points of analogy between the two are listed (1043b35-1044a11):<sup>50</sup> (a) both are divisible until one arrives at indivisibles (b35-36); (b) both lose their identity if anything is subtracted from or added to it (1043b36-1044a2); (c) both stand in need of a unifying unity, some agent in virtue of which it is ἐν ἐκ πολλῶν (1044a2-9); (d) neither admit of variations in degree (1044a9-11; the famous 'more and less' principle of the Platonists is here alluded to.

Let us start with the full text:

*Ibid.* 3, 1043b32-1044a11: If ousiai are in a sense numbers,<sup>51</sup> it is in the previous sense,<sup>52</sup> and not, as some maintain, as series of units. A definiens, sure enough (γάρ), is a sort of number, since (a) it is divisible into indivisibles (every definiens being finite), and the same is true of number. And (b) just as, if you add or subtract anything (however small) from the things of which a counted quantity<sup>53</sup> consists, it is no longer the same number but a different one, so too a definiens expressing a thing's quiddity will no longer remain once anything has been added or subtracted. Further, (c) a number must be something in virtue of which it forms a unity<sup>54</sup> — they [i.e. our opponents] cannot, on their present assumption (vñv), say owing to what it forms a unity — that is, if it is a unity at all. For either it is not, but is like a heap, or it really is a unity, and then it should be explained what it is that makes it one out of many. Likewise a definiens is a unity, and again they cannot explain this either. And this is a natural result; for the same ratio applies to both. And so ousiai are one in this way, not by being a kind of unit or indivisible point, as some say, but because each of them is a certain nature in actuality (ἐντελέχεια καὶ φύσις τις ἐκάστη). Also (d) just as no number admits of being more or less, so

<sup>50</sup> Ross II, 231; Burnyeat I, 20f.

<sup>51</sup> Ross's paraphrase (II, 231): "if numbers are substances", where (unlike in his rendering in the *Oxford Translation*) the definite article before οὐσίαι is ignored, must be a slip of the pen.

<sup>52</sup> *Pace* Burnyeat (22), οὕτως refers back to what is said in 1043b4-14, not forward to what follows. (On p. 21 Burnyeat takes the adverb to refer back).

<sup>53</sup> For the concrete sense of ἀριθμός ('applied number') see my section 12.33.

<sup>54</sup> I have chosen the rendering 'forms a unit' on purpose, since the Greek ᾧ εἶς is equally ambivalent, expressing not so much that by which the ἀριθμός is itself a unit as that owing to which the things taken together by it are a unit.

neither does the ousia taken as form (ἡ κατὰ τὸ εἶδος οὐσία), but if any ousia does, it is the enmattered ousia.

Note first that, unlike in the cases (a), (b), and (c), the fourth analogy bears on ousia taken as the sole form and the agent of unity, not the compound unity itself. Understandably, Bostock (269) takes lines 1044a9-11 to be something of an afterthought. It is often<sup>55</sup> asserted that these lines are at variance with *Cat.* 5, 3b33-4a9, where it is supposedly implied that not even the ousia taken together with its matter (ἡ μετὰ τῆς ὕλης) can to a higher or lesser extent ('more or less') be the ousia it actually is. However, it is wrongly assumed that the phrase ἡ μετὰ τῆς ὕλης means the concrete individual or σύνολον; it actually refers to the form taken *qua inhering* in something. What Aristotle is trying to say is that even the enmattered form *qua* form is not susceptible of being intensified or diminished, though, of course, the compound is. For instance, Callias can become more and more a human being, but the manhood inhering in him cannot be intensified. This development as a man depends on his matter which increasingly gives in to the form, manhood. Likewise, someone may be more a cobbler than someone else, but this does not mean that the former's 'cobblerhood' is greater than the latter's.<sup>56</sup>

Our understanding of the general purport of Aristotle's exposition mainly depends on grasping the exact sense of ἀριθμός as opposed to 'one'. Basically, ἀριθμός is one of the two counterparts of 'one'. The elementary notion 'oneness' — which because of its close relationship to 'beingness' and 'definiteness' (and 'finitude'), plays a crucial role in Ancient thought — is always used in a twofold opposition. On the one hand it was opposed to chaotic, immeasurable, abysmal plurality, which was bound to provoke the well-known Ancients' 'horror infiniti'. On the other, it was the counterpart of surveyable, orderly and countable plurality. This is where the notion of ἀριθμός comes in. This word, which is never used to stand for what we call the 'number' one,<sup>57</sup> is basically associated with orderliness, arrangement and countability. So it has the peculiar capability of bearing on (and arranging) a plurality ('something more-than-one'), and unifying that plurality; and, by the same token, making it 'one' in a way. For

<sup>55</sup> Ross II, 234; Tredennick, *ad loc.*; Burnyeat, 23.

<sup>56</sup> *Pace* Ackrill (1963), 89 re *Cat.* 5, 3b33ff. The correct explanation of this passage is found in Bostock, 270.

<sup>57</sup> Greek εἷς, μία, ἓν (like Latin 'unus', 'una', 'unum') are not themselves an ἀριθμός ('numerus'), but the principle of counting; my sections 12.32-12.33.

instance, in the phrase ‘three horses’, the number ‘three’ confirms the plurality of these horses, but at the same time it makes something one out of them, viz. one trio, which, in turn, can serve as a means or principle of counting, e.g. counting thirty horses as ten trios.<sup>58</sup> In addition, and quite in line with Aristotle’s semantics, the word, by way of metonymy, is also used for the *things* unified by the ἀριθμός as a unifying agent, so that, like English ‘number’, Greek ἀριθμός may be both numeral (Dutch ‘getal’) and series of things counted (Dutch ‘aantal’); see my section 12.32.

On this understanding, the three analogies (a), (b), and (c) are not only fully comprehensible, but also appear to be well-chosen to illustrate the position of οὐσία as sketched in 1043a19-b14 and b23-32. First, (a) the divisibility up to a certain point, and no further: this feature brings about the situation that, just like a unified series, each ousia is a compound, but something definite all the same, not an uncountable plurality. Then, (b) the demand of integrity: just as number (the numeral as well as the series) is bound to lose its identity if something is added or subtracted, ousia inevitably changes from one thing to another if constituents are added or subtracted. Finally, (c) just as number (the numeral as well as the series) requires a unifying agent to be *this* numeral, say ‘8’ composed of 8 ‘ones’<sup>59</sup> — and so the series in order to be *this* series is made out of [*x*] entities — likewise ousia taken as compound (σύνολον) needs an ontic agent, the form, to be a genuine unity composed of the plurality of its constituents.

Bostock (268f.) does not seem very impressed by the comparison, the third analogy in particular. We may perhaps think of Aristotle, he surmises, “as holding that we have three horses only where the three form a *group*, not necessarily in any particular pattern, but at least so situated that they are all close to one another. Of course, such a view is mistaken, for three horses remain three however they may be scattered, but it would not be too surprising if Aristotle had failed to grasp this point” (268). This way of interpreting texts is astonishing: first assuming Aristotle to hold ‘perhaps’ such a view, next deeming it

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<sup>58</sup> Pace Burnyeat (22), who fails to see this and thinks that “it would in any case be odd to say that the number seven (e.g.) *was a principle of unity* among the things it numbered”.

<sup>59</sup> This is Aristotle’s reply to the question he asked at *Met.* A 9, 992a1, with reference to Plato’s doctrine of numbers (“Why is a number, when taken all together, one?”). Cf. M 7, 1082a15-20.

an odd one, and winding up by saying that Aristotle is inconsiderate enough to fail to grasp the oddity.<sup>60</sup>

The chapter ends with a rough outline of what for the author (Aristotle or his editor?) may have seemed the main subjects of this chapter.<sup>61</sup>

#### 10.5 *Some observations on the identification of material constituents*

Chapter 4 opens (1044a15-32) with the observation that things may have different appropriate material, as well as the same. So the matter appropriate to phlegm is the sweet or the viscous (τὰ γλυκέα ἢ λιπαρά), and for bile the bitter (τὰ πικρά). On the other hand, it is possible for different things to come from the same matter if the cause which brings about the change is different: thus from wood both a chest and a bed may be made. A third possibility is that the same thing is made from different matter; in these cases the skill and the efficient principle must be the same.

The passage has raised some discussion in that the text also speaks of ‘ultimate matter’, which has been mistaken by some (Ross II, 235, and Bostock, 272; cf. 73, among other interpreters) for the famous ‘prime matter’. Bonitz was the first to reject that idea.<sup>62</sup> Burnyeat refrains from putting Aristotle’s exposition in terms of ‘prime matter’ and rightly takes Aristotle’s main concern in this chapter to be to insist that you should *not* answer the τί ἐστὶ question (e.g. ‘What is bile?’) in a Presocratic style, by saying: ‘Like everything else, it is earth, water, etc.’, but you should give the specific or proximate matter, as is explicitly said in 1044b2-3 (“One must give the nearest causes”).

The main purport of the introductory paragraph is, I take it, to make clear that when we are defining a natural thing’s essence, and looking for its material cause as *the* ontic principle, we should not be led astray by focussing on some remote cause, but go straight for its

<sup>60</sup> Bostock’s distinction between abstract and applied numbers (267) is not conducive to a clear interpretation either. The given analogies equally apply to numerals and collections they are applied to. This is also ignored by Burnyeat: I, 21f.

<sup>61</sup> Bostock’s criticism of the summarizing sentence, which he takes to be the work of a somewhat careless editor, is partly based on his mistaking the opponents’ “reduction of οὐσίαι to numbers” (1044a13) for Aristotle’s own view. Cf. Burnyeat II, 24.

<sup>62</sup> See also Bemelmans (1995), 21f.

nearest cause (1044a32-b3). Some additional observations are made on the correct procedure as far as natural ousiai (whether corruptible or eternal), and natural things that are not ousia, are concerned (1044b3-21).

In this context, the definition of non-substantial things such as eclipses is of concern. As is well known, the eclipse is a favourite example in Aristotle's doctrine of epistemonik proof. The pivotal role coincidental forms may have as formal cause-and-principle of things' having attributes comes to the fore:

*Met.* H 4, 1044b8-15: Things which are by nature, but are not themselves ousiai, do not have matter; what underlies them is the ousia. For instance, what is the cause of an eclipse?, what acts as its matter? It has none. Rather, the *moon* is that which is affected. And what is the efficient cause of the extinction of the light? The earth. The final cause does perhaps not exist. The formal cause (τὸ δ' ὡς εἶδος) is that which is expressed by the definiens, but this is obscure if it does not include the <efficient> cause. Thus <we get the following procedure>: What is an eclipse? A deprivation of light. And if one adds 'due to the earth coming in between', there you have the definiens including the cause.

In the final paragraph (b15-20), Aristotle remarks that in the case of sleep it is difficult to determine what precisely is primarily affected, i.e. what precisely is the underlying thing. Is it the animal? But if so, in virtue of what primarily? The heart, or something else.<sup>63</sup> As for the efficient cause, by what is sleep effected? Further, what is the affection, speaking formally, that is to say, what is the affection of that part of the animal which is primarily affected? Is it a sort of immobility? No doubt, but to what process in the primary subject is this due?<sup>64</sup>

What this chapter has made clear, then, is that the process of defining things, including changes which they undergo by nature ('natural events'), requires people to sharply discriminate the different causes and the specific hypokeimenon underlying these changes.

The fifth chapter (1044b21-26) opens with a remark on the contingent existence of certain entities, forms and shapes (τὰ εἶδη καὶ αἱ μορφαί)<sup>65</sup> in particular, which at one time are and at another

<sup>63</sup> In *Somn.* 2, 455a20-b25; 456a2-6, sleep is described as an affection of the heart qua primary seat of all perception (τὸ αἰσθητικὸν πάντων). Its occurrence is explained in III, 457a33-458a10 (cf. *PA* II 7, 653a10-20); its final cause is relaxation, which is necessary for all animals.

<sup>64</sup> The epistemonik procedure of this paragraph is a nice example of Aristotle using the devices of focalization and categorization.

<sup>65</sup> Following the reading of the Laurentianus and William of Moerbeke's exem-

time are not, and cannot ever be captured as being involved in a process of becoming or passing away.<sup>66</sup> Thus it is not the form ‘white’ or ‘whiteness’ (τὸ λευκόν) that comes to be, but the white piece of wood, supposing, that is, that everything that comes to be comes from something and comes to be something. For this reason, to say that all opposites come to be from one another is an ambiguous way of putting things. It is true, a pale man comes from a dark man as one opposite from another. But when we say ‘pale comes from dark’ as one opposite from another, we mean something different: the *terminus a quo* and the *terminus ad quem* in the latter expression are not the attributive features — ‘pale(ness) and dark(ness), respectively — but the things they inhere in as their underlying things.<sup>67</sup>

This leads the author to observe (b27-29) that, re ‘underlying thing’, not all things have matter as an underlying thing, but only the things susceptible of generation and reciprocal transformation. The things just mentioned, which at one time are and at another are not without actually being involved in a process of generation or corruption, have no matter.

Two problems concerning the position of matter in reciprocal transformation are raised, and tentatively solved. One bears on the relationship of the opposites to a thing’s matter. Supposing the body is potentially healthy, and disease is the opposite of health, must the body be potentially both healthy and sick? And is water potentially both wine and vinegar? Or is it rather the matter of the one in virtue of its state and form, and of the other in virtue of the privation of that state and a decay that is contrary to its nature (b29-34)? Apparently, Aristotle means to say that the body qua hypokeimenon remains the same, but should be regarded from different angles, corresponding to the process of the (incidental) transformation; and the same holds for the water-wine-vinegar example. Notice that in point of fact it is informed matter that is under consideration, as also enmattered forms that are involved in the process of change.

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plar. For μορφή as formal principle and its juxtaposition to εἶδος see Bonitz, *Index*, 474a28-56, and a57-b7 (μορφή as dynamic internal power).

<sup>66</sup> *Met.* H 3, 1043b14-16. At E 3, 1027a29-30, principles and causes are claimed to be of this kind. Cf. *Met.* B 5, 1002a32-35, where there is talk of mathematical entities (“Points, lines, and planes, though they are at one time and at another are not, cannot be in process of being either generated or destroyed”); notice that in the present chapter points are also instantiated (at 1044b22).

<sup>67</sup> See the semantic Main Rules; my section 1.71.

The other problem is closely related to the previous one. Why is wine not the matter of vinegar, nor potentially vinegar, although vinegar comes from wine? The same holds for the transformation from living body to corpse. These questions, too are only tentatively answered. Perhaps, Aristotle suggests, the reason is that the decay is something coincidental. Along this line of thought, it is not the animal itself, but its matter that is also, by decay, the matter and potentiality of the corpse. Likewise, it is not the wine but the water that is the matter of the vinegar. Their occurrence may be compared to the way night comes from day.<sup>68</sup> Matter always acts as an intermediate thing between animal and corpse, and between wine and vinegar (1044b34-1045a6).<sup>69</sup>

Burnyeat (37) has rightly observed that the theme of opposites changing into one another provides the somewhat tenuous connection with the first half of the chapter. He may also be right in deeming H 5 “a bitty and unsatisfactory chapter containing no new material of any great interest”. None the less, it continues, in its own peculiar way, the stream of thought of the previous chapters, dealing with the broader problem of framing a *definiens* including that of matter. What H 5 is concerned with is the position of matter, not, this time, in the case of things being, but in their becoming. Thus one can understand the editor’s motive for putting this text into Book H.

#### 10. 6 *The unity of the definiens finally stated*

The concluding chapter of Book H opens (1045a8-14) with a clear exposition of the problem concerning the unity of the *definiens* by

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<sup>68</sup> The common substratum of day and night may be the air (cf. *Met.* A 4, 1070b21).

<sup>69</sup> I agree with Burnyeat (II, 38) that, *pace* Ross, at 1045a3-4 (μεταβάλλει εἰς ἀλλήλα) no mention is made of reciprocal transformation as far as wine and vinegar, or animal and corpse are concerned, but only that from vinegar to wine or corpse to living thing (mentioned at a4-6). For the unilateral use of ἀλλήλων see Thucydides III, 81: “Most of the suppliants [...] set about destroying one another (διοφθεῖρον ἀλλήλους) [...]”; for father slew son (...); Theophrast, *Metaph.* 5b25 (εἰς ἀλλήλας τὰς μεταβολάς), where the particular instances of changes of one element into the other are discussed (Van Raalte, 1993, 235); Arist. *Cat.* 3, 1b16-17: “The differentiae of genera which are different and not subordinate one to the other ....”, where the subordination is not mutual (as usually happens with subordination, for that matter). In this connection Bostock (278) raises a fascinating, but irrelevant question: “It seems very probable that Aristotle did believe that animals, such as maggots, may come from corpses. Did he also believe that wine may come from vinegar?”.

putting it in the broader context of the previous discussions of Z, chs. 10ff., and H, chs. 1-3. In the case of all things which have several parts and in which the whole (τὸ ὅλον) is something over and above their parts, and not just the sum of them all, like a heap, there must always be some cause of their unity. Offering an evident example of what I have in mind,<sup>70</sup> Aristotle intends to say, there is the case of bodies, where the cause is sometimes contact, sometimes stickiness, or some other affection of this sort. The unity of a definiens, however, is special, since it is an account that is one not by being bound together (οὐ συνδέσµω), as for instance the *Iliad* is, but by expressing something that already is by itself a unity. In other words, in the case of quidditative units, it is not the act of defining, but the definiendum itself that founds the unity of the definiens.<sup>71</sup>

This raises the question what it is that has made this something a unity rather than a plurality; e.g. what makes a man a unity rather than a plurality consisting of 'animal' and 'two-footed'? This problem is especially acute to the Platonists, who claim that there are an 'Animal-itself' and a 'Two-footed-itself'; for why does man participate, not in one single Form, 'Man-itself', but in two, 'Animalhood' and 'Two-footedness'? To put it generally, man (no matter whether the particular or the Platonic Form, Man is meant)<sup>72</sup> would be not one, but a combination consisting in 'animal' *plus* 'two-footed' (1045a14-20).

Alluding to his exposition in H 2-3, Aristotle proceeds (1045a20-33) to claim that any problem will vanish if we explain the unity in terms of actuality (form) and potentiality (matter). Next he goes on to illustrate this by his favourite semantic ἰμάτιον device, this time applied to the case of the bronzen sphere.<sup>73</sup> Supposing that this

<sup>70</sup> Burnyeat (II, 39) rightly claims that probably καί is used to introduce a striking example, rather than to suggest that bodies are the weakest examples of unity (Ross, and Bostock *ad loc.*).

<sup>71</sup> Cf. Z 12, 1037b24-27, where it is explicitly stated that a thing's proper definiens must express something that is one.

<sup>72</sup> I think we need not be puzzled (with Burnyeat II, 39f.) about what is meant by 'man' here, either the particular or the Platonic Form, because for Plato too, the communion of Forms takes place in their immanent status, not in the transcendent Realm; De Rijk (1986), 122-5; 134-9.

<sup>73</sup> My section 9.32. That in speaking of 'round bronze', Aristotle has 'bronzen sphere' in mind — or is he actually pointing to some particular sphere in the class room? — appears from a32-33; cf. Burnyeat II, 41. On this assumption, the problem raised by Bostock (282) disappears. He points out that 'round bronze' is merely a coincidental compound, like pale man. But if there is talk of a sphere (or ball) the roundness is an essential property.



single name, ἰμάτιον, when used to stand for the definiens of the compound entity 'round bronze', is apt to represent the unity of this entity, then what we are looking for (τὸ ζητούμενον) when it comes to *explaining* the unity will be the cause of the roundness and the bronze being some one thing. If we put things this way, the problem disappears, because evidently one component is the compound's matter or potentiality, the other its form (μορφή) or actuality. Thus the question becomes: 'What is the cause of what is potentially now being in actuality, alongside the efficient cause in the case of things that are generated?'<sup>74</sup> Now there is no other cause of the potential sphere's being an actual sphere but the essences of both constituents, the bronze and the sphere; for the essence of bronze entails its being potentially a sphere, while the sphere's essence allows its potency to be materialized in bronze.<sup>75</sup>

By thus explaining the cause of unity, the author has taken up the previous issue (Z, chs. 12 and 17) of the definiens including matter, and he reminds us of the distinction between intelligible and sensible matter made before, at Z 10, 1036a9-11.<sup>76</sup> As we have stated when commenting on these lines, by 'intelligible matter' (ὕλη νοητή) Aristotle understands the general condition of material constitution falling to all material things, and the corresponding condition of extensionality which belongs to objects in mathematical abstraction. Although in the present illustration of intelligible matter ("a circle is a plane figure"; 1045a35) the material element of the circle — which is common to other circles, whether of the same or of different size), as well as other planimetral figures — is at the same time the generic element, there is nothing to compel us to assume, with Ross and some others, that 'intelligible matter' has here a somewhat different,

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<sup>74</sup> Deleting at 1045a31 (with Burnyeat II, 40f., Bostock, 39, and Ross, in the *Oxford Translation*) the comma after ποιῆσαν.

<sup>75</sup> The common interpretation (Alexander CAG I, p. 562<sup>10</sup>; Ross II, 238; Tredennick, 424, note a; Burnyeat II, 41), to the effect that it is the essence of the potential sphere to become the actual sphere, and of the actual sphere to be generated from the potential sphere, is rightly rejected by Bostock (284); in line with this argument, the constituents, bronze (matter or potentiality) and sphere (form or actuality), are intended. However, Bostock fails to see the point at issue, it seems, saying that "it is *not* part of the essence of the bronze that it should be a sphere". Surely, to be *potentially* a sphere is part of its essence.

<sup>76</sup> In my view, the lines 45a33-35 should be immediately connected with the previous lines on matter and potentiality as the essential ingredients for there to be an ontic unity made up, which is to be adequately expressed in a proper definiens. At a36 a fresh start is made by embarking on the problem how to conceive of the unity of what is without any matter.

analogous meaning, namely genus. I think Bostock (284f.) is right in taking the lines 1045a33-35 to mean that after Aristotle has just been talking of defining a spherical piece of bronze, he is reminded that the definiens of a mathematical entity too includes matter. On the unitary interpretation of 'intelligible matter' in Z and H, then, the illustration that a circle is a plane figure aims to indicate that the plane is the intelligible matter of which spheres are made. "Different circles differ from one another by being 'made of' different parts of the plane" (Bostock, 284).

Next, by shifting attention from the logical unity of the definiens to the ontic unity of things that contain no matter whatsoever, a difficult problem is addressed. To put this problem differently, what use would there be in guaranteeing the unity of form and matter of things if you do not know how the form by itself — to Aristotle, the enmattered form taken in abstraction from its sensible matter, and even from its condition of 'materiality' ('intelligible matter'), to the Platonists, the transcendent Forms — is a unity? This is a major philosophical problem.<sup>77</sup> Aristotle's exposition contains some valuable indications concerning his basic ontological tenets. Let us give the floor to Aristotle, first:

*Met.* H 6, 1045a36-b7: But things that have no matter, either sensible or intelligible, are at once (εὐθύς)<sup>78</sup> something *one*, without qualification (ὅπερ ἔν τι), each of them, just like they are also some what-it-precisely-is-to-be (ὅπερ ὄν τι). I mean precisely to *be* a subsistent entity, or *be* a quality, or *be* a quantity. That is why neither the *be*-element nor the *one*-element occurs in the definiens, and also a what-being-is is at once something *one*, as something *be-ing* too. That is also why, for any of them, there is no further cause of their being some *one* thing, or of their being something *be-ing*. Each is at once something *be-ing* and something *one*, and not because *be-ing* or *one* should be their genus, nor because they should be separable from particulars.

What Aristotle means to say is:

(a) The various forms of *be-ing* and being-*one*, as they are classified in the ten categories of *be-ing* — and being-*one*, we may add — are by their own nature a unity, without requiring an outside agent. *Pace*

<sup>77</sup> I am afraid that Burnyeat's diametrically different approach to this paragraph would put us, as it has done him, on the wrong track. By directly linking up this paragraph with the previous arguments, he says (II, 42): "There is even less of a problem about the unity of items which do not have a material component to be unified with an actuality. They are immediately one". I have to agree that Aristotle brings up the issue by solving the problem at the outset.

<sup>78</sup> I.e. by their own nature, without anything else effective of the unification.

Ross (II, 238), the categories as *summa genera* are not intended, but any particular categorized according to one or more of the categories of being. Consequently, it is modes of being, taken *in abstracto*, that are meant. This position entails three corollaries:

(b) Since each categorial mode of *be*-ing comprises the *be*-element and the *one*-element in itself, these elements are not explicitly expressed in a thing's definiens. Thus man is defined as 'two-footed animal', not as 'two-footed-being animal-being', or 'two-footed-one animal-one', in spite of the fact, as has been said more than once,<sup>79</sup> that 'man' equals 'man-being', 'animal' 'animal-being' etc., and 'man' equals 'man-being-one' etc.

(c) No formal ontic element of the particular things requires a cause for their oneness or beingness. Such an element is itself *be*-ing and *one*, and although its *be*-ing is a special mode of *be*-ing and being-*one*, this does not mean that 'be' and 'one' should be their generic elements (which they definitely are not, since 'be' and 'one' are not a genus).<sup>80</sup>

(d) Just like 'be' and 'one' cannot be separated from the formal modes of *be*-ing, they are not separable from the particular things.<sup>81</sup>

The problem of the 'bare form' as against its fundamental relationship to matter and being enmattered, which presents itself to any metaphysician, no matter of what school, has led to various unsatisfactory answers (1045b7-16). Some came to talk of 'participation' (μέθεξις), but they are at a loss when asked what participation is or what its cause is. Others have spoken of 'communion' (συνουσία), for instance the sophist Lycophron, who says that knowledge is the communion of the act of knowing with the soul; others again call being alive 'the composition or tying together (σύνθεσιν ἢ σύνδεσμον) of soul with body'. In fact, the same account applies in all cases. E.g. being healthy will be the communion, tying together, or composition of a soul and health; that the bronze is a triangle will be

<sup>79</sup> My section 1.64.

<sup>80</sup> *APo.* II 7, 92b14; *Met.* B 3, 998b22, Δ 28, 1024b9-16, I 2, 1053b22-24. Elsewhere Aristotle has no worries about seemingly contradicting himself by using in similar contexts the term γένος in a slightly different sense. Guthrie (VI, 205, n.1) is right in observing that it is typical of Aristotle that at *An.* II 1, 412a6, he is speaking of οὐσία as γένος ἐν τι τῶν ὄντων (cf. *Phys.* I 6, 189a14: ἡ δ' οὐσία ἐν τι γένος), whereas at *Met.* Z 1, 1028a30, it is 'not some being but being primarily and simply'; and one can see, Guthrie correctly adds, what he means in either case.

<sup>81</sup> This ontological assessment is at the background of Aristotle's favourite conceptual analysis throughout.

the composition of bronze and triangle, as being white will be the composition of whiteness and a surface.

Aristotle does not hesitate to give the diagnosis, and offer the remedy (1045b16-23). All these people fail to see the pivotal role of potentiality and actuality, and hence are unable to explain the oneness in things, which should be expressed in their proper definiens, because they are looking for such mutually exclusive things as a 'unifying ground' concerning potentiality and actuality, as well as the contrast between them. Thus they miss the decisive point, namely that the ultimate (or proximate) matter and the enmattered form are one and the same thing, the one being it potentially, the other in actuality. Hence it is as if they were asking what the cause is of oneness and being one; but, as we have just seen, this is senseless, because each thing *is* one, and the potential and the actual are in a way one. Therefore there is no other cause, except, of course, the efficient cause required for bringing about the change from potentiality to actuality. But, as has been sufficiently explained in the previous paragraphs, all things which have no matter are, without further qualification, just some one thing (ἀπλῶς ὅπερ ἓν τι). In other words, being one is the metaphysical feature that precedes any categorial modification.

This conclusion of the Z-H discussion signals Aristotle's tenacity in forwarding his own ontological position. Ross (II, 238) has well observed that the certain amount of repetition,<sup>82</sup> which must strike the reader, even within H 6 itself, is for the sake of emphasis. The author takes great pains to make clear that the other thinkers were not up to solving the "hardest and most urgent of all problems" (*Met.* B 4, 999a24), which bears on the relationship in the things outside between what is the (unknowable) strictly individual and what is knowable, a relationship which, as founded upon their complementarity, must not jeopardize the thing's oneness. Since none of his competitors had the right view of form as actuality and matter as potentiality, they inevitably got stuck in unsatisfactory attempts and would-be solutions, such as 'participation', 'composition', or 'tying together'. They failed to see that one does not need an explanation for the oneness of the potential and the actual (1045b16-17), and by missing this crucial point, they sought bonds to hold the two ontic constituents together, and, in the logical domain, to guarantee the unity

<sup>82</sup> E.g. Aristotle's previous rejection of participation as effective of unity in Z, 12, 1037b18-24; Z 14, 1039b2-6.

of the definiens.<sup>83</sup> But rather than opting for some mysterious unifying cause, one should look instead, as Aristotle never tires of insisting, for the immanent cause in thing [*x*], which is a potential [*y*], which causes [*x*]'s potency to be actualized — to turn into [*y*]. This cause, then, is one aspect of [*x*]'s dynamic *eidos*.<sup>84</sup>

Before pursuing Aristotle's expositions of the final book (Θ) of the central part of the *Metaphysics*, it seems worthwhile to insert an excursus on some controversial issues concerning the books Z and H.

### 10. 7 *An excursus on three controversial issues in Met. Z-H*

As we have remarked upon before, for Aristotle the main metaphysical problem is how to explain true knowledge (ἐπιστήμη), given (a) his unshakeable metaphysical principle that there is no real universal entity, and (b) his loyalty to the basic Ancient conviction that there is no true knowledge or definition of the particular, since there can be neither knowledge nor definition of the ever-changing. From as early as Socrates's days, true knowledge was substantially

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<sup>83</sup> Burnyeat II, 43f. Bostock (286f.) wrongly reduces the whole issue to "just ordinary predication", and refers to Lycophron's peculiar "concern with the 'is' of predication" criticized by Aristotle at *Phys.* I 2, 185b27-28. But, firstly, this merely bears on the logical aspect of what is essentially a metaphysical problem; and, secondly, from the viewpoint of logic, it is not sentence predication and statement that are involved, but the broader issue of attribution and appellation (naming). So his blaming (287) Aristotle for not having made clear that "these remarks on predication are at all relevant to his topic in this chapter, the problem of the unity of the definition", is ill-founded, and is yet another reason to abandon the commentators' persistent habit of explaining Aristotle's statement-making utterances in terms of sentence predication of the 'S is P' form, and his definitorial phrases ('definientia' in their capacity of incomplete assertibles) as fully-fledged definitions. For the important, and often decisive role of (complete and incomplete) assertibles, as opposed to assertions, in Aristotle see my section 2.16. Remarkably enough, Bostock seems to have been quite close to the correct understanding of the semantic issue when continuing (*ibid.*): "The answer can only be that he is presuming that the unity of the proposition 'the bronze is round' [there is at 1045a26-28 no talk at all of a proposition, but merely of naming, *De R.*] carries with it the item referred to by 'the round bronze', and that this in turn carries with it the unity of the proposed definition [read 'definientis'] 'a round bronze'. [...]. The phrase 'a round bronze' is regarded as itself a phrase in which a form (signified by 'round') is predicated [not as a sentential predicate, clearly, but as an attributive appellation; *De R.*] of matter (signified by 'bronze'). So we may generalize and say that any definition [read 'definientis'; *De R.*] which predicates form of matter in this way will define a unity". In point of fact, Bostock's 'revised' Aristotle comes very close to the genuine one.

<sup>84</sup> At Z 13, 1038b5-7 the hypokeimenon is significantly described in terms of potentiality.

associated with defining a thing's *eidos*, and, so to speak, discarding or neutralizing the thing's matter. The metaphysical problem, then, in principle concerns the position of matter. It is branched out in three overlapping problematic issues: (1) Is the immanent form universal or particular?, (2) Is matter *the* principle of individuation?, and (3) Should matter be included in the definiens? Among modern interpreters these three issues are highly controversial. Small wonder indeed because one's answers to these questions are representative of the interpreter's personal view concerning the main subject matter of the central books of the *Metaphysics*.

#### 10. 71 *Again, the particular status of the immanent form*

Frede & Patzig rightly preface their treatment of the first question with emphasizing that Aristotle uses the term εἶδος in two main senses, one the ontic form which intrinsically causes a thing to be precisely what it is, the other the species that is common to whatever possesses the same form.<sup>85</sup> The ambivalence<sup>86</sup> of the term clearly comes to the fore in a statement in Book Λ, in which the two senses occur side by side without offering any difficulty to the reader:

*Met.* Λ 5, 1071a27-29: These things [i.e. the causes and principles of things] in the same species are different, not specifically (εἶδει), but in the sense that the causes and principles of the particulars (τῶν καθ' ἕκαστον) are something different, your matter and form (εἶδος) and moving cause being different from mine, while in their universal definiens (τῷ καθόλου δε λόγῳ) they are the same.

Many other passages can be adduced in support of the thesis that each thing's immanent form is some particular form proper to it and to nothing else.<sup>87</sup> All this evidence should be evaluated in the context

<sup>85</sup> Frede & Patzig I, 48f. I am much indebted for the present paragraph to the excellent discussions they have devoted to this problem throughout their commentary on Book Z: I, 48-57; II, 12-5; 147f.; 177; 189-91; 202; 241; 244-7; 283; 303, all in all providing us with a wealth of evidence for the position argued for here.

<sup>86</sup> I prefer 'ambivalence' to Frede & Patzig's 'equivocity' ('Mehrdeutigkeit'); my section 1.72. I cannot therefore go the whole way with them, when they ask why Aristotle made no attempt to avoid the 'equivocity'. The ambivalence, for that matter, is a good thing in that it associates, rather than confuses two closely related features, 'possessing a specific form' and 'sharing this feature with other particulars'. My section 1.72.

<sup>87</sup> First and foremost the evidence put forward by Heinaman (1973, 297-303) should be referred to in support of Aristotle's assuming the existence of individual instances of properties, outside *Cat.*: *Top.* I 9, 103b29-37; IV 6, 127a20-25; *Phys.* V 4, 228a3-12; VII 1, 242a16-b41; *Long. vit.* 2, 465a19-26; *EN* I 6, 1097a11-13; see also

of what Guthrie (VI, 103) has termed “Aristotle’s inviolable common-sense postulate, *the primacy of the particular*” (his italics). Guthrie has well observed (*ibid.*) that with this postulate “goes the picture of the philosopher examining the things around him in order to abstract, by means of a logical analysis, certain common features which exist — in the things but not otherwise — which can none the less be regarded in abstraction from them by the mind and will explain their nature”.

The cognitional procedure involved is hinted at by Aristotle more than once. At *Met.* Z 10, 1036a5-8, he claims that particulars are not defined, but apprehended by sensation accompanied by ‘intuition’ (νοῦς), and also spoken of (‘appellated’) and known through the thing’s (universal) definiens. Elsewhere (*APo.* II 19, 100a16-b3) he tells us that sensation of the particular directly puts us in touch with what is universal and common; for seeing the particular, Callias, we obtain our first awareness of ‘man’.<sup>88</sup> However, one may still charge Aristotle with failing to clarify the nature of the act of abstracting the universal from what is particular, and the role of intuitive cognition which seems so indispensable for the process of abstraction, but we should not ignore the numerous hints at the forms’ particular status, which are to be found in what he is actually asserting.

Here are some more arguments in support of the ‘particular forms’ thesis.<sup>89</sup> Aristotle often<sup>90</sup> calls the immanent form a τόδε τι, which implies that it is something particular, as has been standard lore for Aristotle from as early as the *Categories* (5, 3b10-14). The form

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*Met.* N 2, 1089b20-32, where the issue of individual, non-substantial instances is addressed in the context of Aristotle’s polemic with Plato. As is well known, in *Cat.* Aristotle admits individual instances of non-substantial modes of being as well, e.g. 5, 2a34-b5 and b37-3a6; 3a29-32 and 4a10-16; 6, 5a33-35; 8, 10b26-29. See also the clear discussion of this issue in Wedin (1978), and Hafemann (1998), 225; 233f.

<sup>88</sup> Also *EN* VI 12, 1143b4-5. Cf. the use of θιγγάνειν (‘to touch’) at *Met.* Θ 10, 1051b24-25; Λ 7, 1072b20-21.

<sup>89</sup> Sellars (1967), 118ff.; Frede & Patzig I, 52-4; also their discussions of a great number of passages of *Met.* Z. Cf. Heinaman (1973), whose argument is unhappily obscured, though, by his sticking to the inappropriate idea of sentence predication, instead of using the generic device of ‘appellation’ or ‘designation’.

<sup>90</sup> *Met.* Δ 8, 1017b25; Z 3, 1029a28-29; H 1, 1042a29; Θ 7, 1049a35; Λ 3, 1070a11-13 (cf. a31-33: “Causes and principles are in a sense different for different things, but in another sense, speaking generally and analogically, they are the same for all”); *GA* I 3, 318b32. Ross I, 310 re 1017b25: The form is said to be τόδε τι. It is more often the concrete unity of matter and form that is so described, but form is the element that gives individual character, and so the form is sometimes called τόδε τι. (Cf. H 1042a29, Θ 1049a35, Λ 1070a11, 13-15, *GC* 318b32).

is sometimes<sup>91</sup> designated as ὑποκείμενον, which again implies particularness. Furthermore, his claim<sup>92</sup> that it is possible for a form to exist at one time, and not at another, can only be understood as holding of particular forms, which are destructible as such, whereas the preservation of the species is due to reproduction.<sup>93</sup> In this context, the lines Z 7, 1032a24-25, should be interpreted as stating “that from which they (i.e. changeable things) come into being is a nature (φύσις) and so, too is that in accordance with which they come to be — since what comes into being possesses a nature, for instance a plant or an animal — and so too is that by which they are brought into being”.<sup>94</sup> Moreover, Aristotle often speaks of the form taken universally, which implies that prior to this logical manipulation, it lacks universality. Again, on several other occasions, the form is explicitly called the thing’s own and proper form, e.g. at Z 13, 1038b10: “the ousia of a thing is peculiar to it”. In the same chapter Aristotle claims that no ousia can be composed of universals, because a universal signifies a *quale*, not a *this*. Obviously this claim should be viewed as linked up with the thesis that none ousia is itself universal either. Likewise at *Met.* M 2, 1077b12-27, there is talk of particular immanent εἶδη; Cleary (1995), 305.

Any counter-argument against the above thesis plays on the Ancient requirement also adhered to by Aristotle, that the proper object of any definition and genuine knowledge is what is universal;

<sup>91</sup> *Met.* Z 3, 1029a3; H 1, 1042a28-29.

<sup>92</sup> *Met.* Z 8, 1033b6; 15, 1039b23-26; cf. H 5, 1044b21f.; A 3, 1070a15-17.

<sup>93</sup> *An.* II 4, 415a26-b8: “Life’s functions are reproduction and the assimilation of food [...] viz. to reproduce another like itself, an animal producing an animal, and a plant a plant, in order that, as far as its nature allows, they may have a share in the immortal and the divine; all things, then, strive for this. [...] Since, then, they cannot share in the immortal and the divine by continuity of existence, because no perishable thing can forever remain numerically one and the same, they try to achieve that end in the only way they can. [...] What persists is not the thing itself, but something like itself, numerically not one, but specifically one”. “Form is eternal only by virtue of the never-failing succession of its embodiments:”, as Ross (1949, 175) puts it; cf. *Met.* Z 15, 1039b20-27. In particular, the biological works offer overwhelming evidence for the particular status of immanent εἶδος. See e.g. Balme (1987), 291-306; (1990), 49-54. However, Balme (1987, 20) is wrong in saying that in *HA* Aristotle had to solve a grave problem arising in *Met.* Z, in particular the “paradox of [...] the snub nose, of the indefinable individual”. In actual fact, if there were any paradox in *Met.* Z it already collapsed there. What the biological works provide us with is a corroboration of what can be gathered from the observations in *Met.* Z on account of the metaphysical status of immanent forms. For some related doctrinal concordance see Cooper (1990), 55-84, and Frede (1990), 113-29.

<sup>94</sup> Forms do not come into being (γίγνεσθαι), but rather ‘make their appearance’ (ἐπιγίγνεσθαι); see Frede & Patzig II, 136f.; 202f.



and that the thing's *eidos*, which is such an object when it comes to genuinely knowing a thing, must, therefore, be universal, not particular. I cannot understand why even Frede & Patzig (I, 55f.) see a baffling problem lurking here.<sup>95</sup> Again, the sole intricate problem is how to explain the ins and outs of the abstraction process of producing a universal form out of a particular, which is just as mystifying as Plato's 'fixing one's eyes on the Idea or Form' (as e.g. in *Rep.* X, 596B7). But however unclear all this may be, as far as the particular status of the immanent forms is concerned, it suffices to stress the distinction between the logical and ontological domains. It is not surprising that as soon as the logical domain of defining and knowing is being considered, the *eidos* taken universally, as a purely logical tool, that is, comes into focus. To define a thing and to take it one way or another are mental actions, which as such do not necessarily depend on the various ways in which the (putative) objects are (thought to be) in existence. It is along these lines that we should understand Aristotle's speaking of 'forms taken generally or universally', and 'universal forms'.<sup>96</sup>

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<sup>95</sup> In their account of the supposed counter-arguments, they rightly assess them as concerning Aristotle's philosophic tenets themselves. In point of fact, the opponents of the above thesis intend to defend Aristotle against himself, and even go so far as to ignore unmistakable textual evidence. See e.g. Bostock, 185-90; 217f. In a "Note" to Burnyeat II, 26-31, R.W. Sharples understandably reduces the 'Whether particular or universal' controversy to one of terminology rather than of substance. He discusses "the claim that we may represent Aristotle's thought more accurately by speaking not of form as universal, possessed by all members of a given natural kind, but rather of individual forms in each member of a natural kind, forms identical in kind and differing only numerically". He meets the objections made by Lloyd (1970, 522) in particular, in which the confusion between logic and ontology is most explicit. For the general issue see also Heinaman (1979), and Burnyeat II, 15-7 and 24-6. Matthen too presents (1988a, 155-66; 174-6) an impressive defence of particular forms in Aristotle.

<sup>96</sup> G. Hughes (in Burnyeat I, 112) unconvincingly claims that the distinction between 'individual' and 'universal' is not simply one of language or logic, but is rooted in Aristotle's theory of potentiality and actuality. He is of the opinion that this "can be drawn clearly enough on the basis of what Aristotle says, despite the fact that he has elaborated no special terminology in which to say it". All things considered, the sting should be taken out of the controversy 'whether universal or individual' by well marking off the two levels terminologically: the (ontic) form inhering in some  $[x]$  or  $[y]$  is *individual*, while the (logical) species is *assigned to* several instantiations. Therefore, to talk of a *species* being individual is a terminological *abusio*, which can only confuse the discussion (my sections 1.73 and 12.1). In his defence of universal forms in Aristotle, Woods (1991) too continually muddles the logical and ontological levels. Although he clearly sees (45f.) that in Aristotle καθόλου = καθόλου λεγόμενον, he keeps taking commonness in terms of ontology. One may wonder whether the adherents to the view that Aristotle knows of universal forms would believe that in saying 'Michael and his brother share a rare

In an excellent discussion of the inherence of individual forms in things in the context of the 'being-in but not said-of' item (*Cat.* 2, 1a23-24), Daniel Devereux (1992, 124f.) points out that the fact that the particular whiteness *in* Socrates cannot exist apart from him, *in* some other individual, is not a consequence of its being *in* him, but actually a consequence of the particular kind of entity that this whiteness is: non-substantial particulars are entities that can be said of no more than one particular. It follows from Socrates' particular whiteness being *in* him that it cannot exist on its own, separated from him (χωρίς).

Note that Aristotle's view of the particular form fits in well with those of his main predecessors, Socrates and Plato. Aristotle has well observed that Socrates founded universal definition and true knowledge on the presence of a 'common feature' in particular things. Aristotle makes a clear distinction between Plato's thought about Forms and the Socratic *eidos* in terms of transcendence and separation (χωρισμός). From what he tells us about his predecessors it is plain that what he understands by 'separation' is what is sometimes called the 'existential assumption or postulation', to the effect that the object of a real definition must exist apart from its sensible instantiations as an entity of a different, i.e. non-sensible sort. He has always insisted that Socrates kept locating his *eidos*, being a specific entity (called 'essence'; τὸ τί ἐστίν, in Aristotle's words) as a universal (i.e. 'universally assignable') *immanent* cause. At the same time Socrates took the *eidos* as a definitorial 'common thing'.<sup>97</sup>

Reporting Socrates's contribution to philosophy, as distinct from Plato's, Aristotle says that there are two things which may fairly be credited to Socrates — inductive argument and universal definition — both of which are concerned with the starting-point of true knowledge; and he immediately adds "But Socrates did not make the universals or the definientia exist apart".<sup>98</sup> And when describing inductive argument in the *Topics* as the progress from the particular

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sense of humour' the two brethren are denied each their own sense of humour. Matthen defines (1988a, 171) the problem of 'universal vs. individual form' thus: "[...] because a universal predicated of an individual results in an individual attribute, the form predicated of matter results in an individual form. It is these individual forms that Aristotle identifies with individual substances. Note that these are not individual forms in the sense of forms that vary *qualitatively* from individual to individual. They are individual only in the sense that they are distinct instances [*read*: instantiations, *De R.*] of a universal: they are only numerically distinct".

<sup>97</sup> *Met.* A 6, 987b1-9; M 9, 1086a32-b11; see De Rijk (1986), 33-7; 47-51.

<sup>98</sup> *Met.* M 4, 1078b27-31.

to the universal, Aristotle illustrates this with an example of Socratic flavour: if the best navigator is the expert ('the one with knowledge'), and the best driver the expert, and so on, we can infer the general conclusion that the expert (the 'knowledgeable') in every occupation is the best.<sup>99</sup> Induction, then, is accomplished when the mind is 'led on' from the observation of particular instances (and instantiations, i.e. particular forms) to grasp a general feature shared by all the members of a class.<sup>100</sup> That Socrates could not possibly think of some *universal* ontic feature present in the particulars also appears from the fact that, in the earliest dialogues at least, he is reported to recognize *bad* ontic features as well, which are explained in terms of a *particular* deficient ontic status ('vice') caused by the privation of the corresponding good feature ('virtue').<sup>101</sup>

Likewise, even Plato considered the Socratic εἶδη to be particular forms. That is precisely why, in Guthrie's words (IV, 212), Plato, while giving "an affectionate but candid portrait of Socrates as he knew him, and his way of going to work [...] at the same time shows himself puzzled, or not fully satisfied, by the philosophical implications of some Socratic tenets and takes a few tentative steps further, thus foreshadowing some of the problems which will concern him deeply later on". The development of the Socratic doctrine of the particular enmattered eidos into the Platonic doctrine of transcendent Forms partaken by particulars has to be explained in terms of the shortcomings which Plato must have envisaged in Socrates's *particular* forms, which, to Plato's mind, could not possibly meet the requirement of being stable objective realities.<sup>102</sup>

As for Plato himself, Gerold Prauss has convincingly shown (against some scholars who had argued that, since only true Being can be the object of genuine knowledge, this knowledge only concerns transcendent Forms, not the outside particulars), that even though, for Plato, the transcendent Forms are ultimately the true objects of genuine knowledge (ἐπιστήμη), it is the particular's δυνάμεις (or immanent forms) which in fact are the proper object of knowledge.<sup>103</sup> The forms as partaken of by the outside particulars are

<sup>99</sup> *Top.* I 12, 105a13-16. See Guthrie (1969), 426.

<sup>100</sup> *Top.* I 18, 108b10-11. Guthrie, *ibid.*, and Ross (1949), 481-3.

<sup>101</sup> So more than once in Plato, *Euthyphro*, e.g. at 5D1-5; see De Rijk (1980), 38f.

<sup>102</sup> De Rijk (1986), 52-5; 234-53.

<sup>103</sup> Prauss (1965), 105-10; De Rijk (1986), 332-8. See also the fine pages in Guthrie V, 412-7 on Plato's view of the knowledge of the particular. Plato's cognitive procedure is analysed in De Rijk (1986), 338-47.

nothing but the Platonic Forms taken in their immanent status; whilst in their capacity of being known by the philosopher their mental status is in question, which, it should be stressed, is *not* their transcendent status.<sup>104</sup> In the later dialogues, Plato too uses the name of a form (taken in its immanent status, of course) in order to indiscriminately designate the enmattered form (or ‘instantiation of F-ness’) and the particular thing (‘instance’) partaking in the transcendent Form of the same name. For instance, at *Sophist*, 257D11-12, the phrase τῆς τοῦ καλοῦ φύσεως indiscriminately stands for the particular form ‘beautiful’ (or instantiation of Beautifulness) and the beautiful thing partaking in the transcendent Form, Beautifulness.<sup>105</sup>

Thus Aristotle’s view of the forms as *particular* entities (non-subsistent ones, of course) immanent in particular subsistent things as their dynamic ontic causes, fits in very well with the Ancient philosophic mainstream. Once we recognize the similarity we can understand more fully to what extent he disagreed with his master. For like any dispute, the most eager philosophic disputes are likely to be the ones between people who for the most part are on speaking terms.<sup>106</sup>

In the next section it will appear that the question concerning the particular status of the form is closely connected with the one concerning the principle of individuation.

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<sup>104</sup> The threefold status of the Forms is discussed in De Rijk (1986), 18-21; 55-65; 103-9; 140-3; 180-3; 327-30.

<sup>105</sup> De Rijk (1986), 174, *pace* Frede (1967, 88f.)

<sup>106</sup> Without taking sides with either the ‘universalists’ or the ‘particularists’ (cf. Gill 1991, 32-4) Madigan (1999, 80) hints at the ongoing dispute: “Critics dispute whether Aristotelian substantial form is individual, as the texts witnessing to its independence, substantiality, and causal function would suggest, or universal, as the texts witnessing to its being the basis of definition and science would suggest”. On this controversy, see e.g. the ‘universalists’ Owens (1978, 386-9, 426-34), Bostock (1994, 185-90) and Scaltsas (1994, 229-51), who only speaks of *substantial* forms, and while ignoring the peculiar tool of *logical* universal applicability, worries how Aristotelian forms (including substantial *and* accidental ones) can be universal without being separate. Steinfath (1991, 212-333) continually confuses ontological individuality and logical universality. Among the ‘particularists’ are, alongside Frede & Patzig I, 48-57, Witt (1989) 143-79, who rightly deals (176ff.; cf. 126-42 on Nature and Function of Essence) with our question in the context of the doubtful claim that matter is Aristotle’s principle of individuation. Spellmann aptly deals (1995, 21-99) with the problem whether ‘thing’ and ‘essence’ are the same in Aristotle, in terms of referential opacity (21-39), and takes (40-99) Aristotelian ousiai (she has ‘substances’) as specimens of natural kinds, which are “numerically the same but not identical with sensible objects”.

10. 72 *The enmattered form as the principle of individuation*

The few allusions found in Aristotle to the role of matter in numerically differentiating the particulars that possess the same form are often taken as unequivocal claims that matter is *the* principle of individuation, meaning that it is only due to matter that the outside things are numerically different particulars (individuals) in spite of the fact that they possess the same universal form, man, tree, stone, and so on. Ross, for instance, describes the role of matter in the process of individuation re *Met.* Z 8, 1034a2ff. (II, 187), thus: "The individual is 'such a form in this matter', matter being what differentiates individuals identical in form". However, in his standard work on Aristotle, Ross more cautiously speaks (170) of "Aristotle's tendency to find in matter the principle of individuality", which "is due to the dominance in his mind of the idea of the *infima species*, the notion that there are fixed combinations of characteristics which form the core of the nature of all the individuals in which they are present, and that these alone are what nature seeks to secure and perpetuate". Others, like Guthrie (VI, 145), qualify this claim by restricting matter to "matter informed at so low a level as to be stripped of all the qualities which members of the species have in common".<sup>107</sup>

There is enough reason, then, to seriously question the validity of the unqualified adage that for Aristotle, matter is *the* principle of individuation. For one thing, Guthrie's speaking of 'informed matter' implies recognizing the form's role in differentiating kindred particulars. Furthermore, on closer inspection, the spare testimonials which have usually been adduced in support of the unqualified adage, are not convincing at all. To begin with, the main supposed witness at Z 8, 1033b29-1034a8 does not offer the appropriate evidence, as we have seen earlier.

Bostock, who considers the unqualified adage ("Matter is *the* principle of individuation") as Aristotle's standard lore, refers to three other passages of the *Metaphysics*. None of them, however, seem to be conclusive. In the *Lexicon*, Δ 6, 1016b31-35, Aristotle only says that things are numerically one whose matter is one, and formally one if

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<sup>107</sup> Cf. Owens (1978), 199f. It is interesting to note that the qualification of matter as 'informed matter' is not only (rightly) due to Aristotle's frequent evaluation of matter as being entirely 'indeterminate', but to the usual mistaken idea that 'prime matter' is a kind of mysterious stuff. See my sections 12.37-12.39.

the account expressing their form is one. In I 3, 1054a32-35, there is a similar exposition of the notion ‘the same’, in which a thing is called the same “if it is one both in definiens and in number”, which is exemplified thus: “you are one with yourself both in form and in matter”. In A 8, 1074a33-34, it is only noted that all things that are many in number have matter. Remarkably enough, Bostock fails to adduce a passage from the same book which clearly undermines the purport of the unqualified adage. In A 5, 1071a27-29, Aristotle says that the causes and elements of things in the same species are different, not specifically, but in the sense that the causes of different particulars are not the same, “your matter and form and moving cause being different from mine, while in their universal definiens they are the same”. When asserting that your ‘matter and form’ (a28) differ from mine, the author no doubt thinks of what was elsewhere called the ‘enmattered form’. One should never forget that any ‘universal definiens’ is of the logician’s making.

The second of the two metaphysical questions — (1) What are the basic realities of the world?, and (2) What makes them the things they are? — John Ackrill has selected for his discussion of Aristotle’s general metaphysics concerns matter, form, and essence. When asking what explains the substantiality of particular things and their being the different individuals they are, Ackrill (1981, 122) aptly remarks that “it might seem that it is difference in matter or material constitution – what they are made of – that explains our being able to recognize and count different individuals”. After quoting the crucial passage, *Met.* Z 8, 1034a5-8, in which the unqualified adage about matter as *the* principle of individuation has been read over the years, Ackrill continues by paraphrasing (122) Z 17, 1041a9-b9:

“Yet to count Callias and Socrates as *two* depends on counting them as men, and to speak of them as *men* is to refer to their form. [...] Only of a composite thing (form *plus* matter) can the question ‘What makes it a so-and-so?’ be asked, and always in the sense ‘What makes such and such matter a so-and-so?’. The answer will be an account of the form (shape, structure or function) that defines so-and-so’s. [...], and to be a so-and-so is to be a composite, matter with a certain form. It is *qua* having the form that matter is a so-and-so; possession of the form explains the thing’s being the individual substance it is”.

He points out (124) that Aristotle holds in the *Metaphysics* that it is a form or an essence (‘what it is to be a so-and-so’), and not matter, that gives identity and individuality to substances. And quite right he is. So there are many good reasons for rejecting the maxim about

matter as *the* principle of individuation, and to ascribe, instead, this function to the form *qua enmattered*.<sup>108</sup> As for the related issue of the particular status of the form, it can hardly come as a surprise that Ackrill's lucid examination of the main items of general metaphysics leads him to make a suggestion on this score (127f.):

"Secondly, one may suggest that Aristotle does or should accept the idea of *individual* essences (so that *man* no longer counts as Callias's essence). There are several passages in which Aristotle uses the terms 'soul' and 'body' in discussing men and their essence. In these passages it is *soul* rather than *man* that appears as the individuating form of Callias – not his *species* but his *life*. Since 'soul' has a plural and often works as a count-noun, it is quite easy to suppose that Callias has one soul and Socrates another, and that these souls are individual essences".

In the previous section we have seen that Ackrill's suggestion is realistic, and should not only bear on the special case of man's substantial form. Any Aristotelian form, whether substantial or non-substantial, is best viewed as an ontic cause (comparable to Plato's immanent δύνάμις) proper to the one thing it inheres in, and not as belonging to any other instance. Their being common to other kindred instances is a matter of logic, not metaphysics. The fact that a form is partaken of by other particulars depends on *our* habit of comparing things with regard to certain of their features, which they possess each as their proper ones, but all the same have in common. Aristotle was himself well aware that our mind is able to conceive of the sun's and moon's (theoretical) universality, in spite of the fact that there is only one single instance of them in reality.

#### 10. 73 *The adoption of form and matter in the definiens*

It must strike the reader that when dealing (*Mel. Z* 11, 1036b24-28) with the comparison drawn by Socrates the Younger between an animal and a circle, saying that both can be without their parts, man without his usual flesh and bones, the circle without its bronze, Aristotle appears to hesitate about his own position. Although he rejects this equation as misleading, he does not throw away the underlying idea that a thing's matter is not part of its form (my section 9.64). The ambivalence of Aristotle's attitude is aptly sketched

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<sup>108</sup> See also Frede & Patzig I, 43-8, and 56; II, 145; 147; 189.

by Bostock (149-50): there are many places in Z 10-11 where it seems to be assumed that *only* the form has a definiens, of which the claim at 1035b34 that “only the parts of the form are parts of the definiens” is perhaps the most explicit. From this it could be inferred, as is actually done by Frede & Patzig, that there is no such thing as the definiens of a composite.<sup>109</sup>

#### 10. 74 *Is a composite indefinable?*

Bostock (150) is surely right in rejecting the position held by Frede & Patzig, since it requires one to maintain that the compound things which are said to be destroyed into their material parts at 1035a25-27, namely a snub nose and a bronzen circle, have no definiens at all. But Aristotle goes on (1035a28-29) to contrast them with things not compounded from matter, and he describes these latter as “things whose definiens is a definiens of the form alone”. Bostock rightly thinks these lines would be quite pointless if we assume with Frede and Patzig that *any* definiens is a definiens of the form alone.

There are also many places outside *Met. Z* 10-11 in which Aristotle is ready to speak of the definiens of compounds. Bostock rightly refers, apart from E 1, 1025b28-1025a6, discussed earlier, to several other passages. First *Met. K* 7, 1064a23-28, where it is explicitly stated that the definiens of snub (τοῦ σιμοῦ) includes the matter of the thing (τοῦ πράγματος) while that of ‘concave’ (τοῦ κοίλου) is free from matter. For snubness is found in a nose, so that we look for its definiens without doing away with the nose, for what is snub is a concave *nose*. Evidently, then, also the definiens of flesh and of the eye, and of the other parts as well must always be stated without doing away with the matter.

In the second book of the *Physics*, which mainly deals with nature as the proper object of the physicist, the position of the matter of natural things comes up for discussion. At II 2, 194a12-15, the example of snubness is referred to; cf. 194a1-7. Since nature, it is said, includes two elements, form and matter, we must study it as if we were studying snubness, which cannot be defined apart from matter. Things of the kind are neither independent of matter nor entirely constituted by matter. The comparison clearly suggests that

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<sup>109</sup> Frede & Patzig I, 40f.; II, 113; 122f.; 166-198 (*passim*); 203-20, esp. 211-3, re 1036b29.



in such cases the matter should be included in their definiens and, accordingly, in examining their nature.<sup>110</sup>

When in *An.* I 1 the relations between soul and body are under examination, one of the difficult questions is about whether the affections of the soul can exist apart from the body. It is claimed (403a6-25), that anger, courage, desire, and sensation generally cannot, and even thinking cannot either, supposing that it is a kind of imagination, or at least depends upon imagination. The problem is illustrated by presenting an example from mathematics (403a13-16): "It will be like what is straight, to which, qua straight, many properties befall, as, for instance, that it touches a bronzen sphere at a point, yet if taken by itself, it cannot act as a tangent. It is in fact not just by itself, since it is always found in some body".<sup>111</sup> Likewise, all the affections of the soul involve a body, viz. anger, gentleness, fear, pity, courage, joy, love and hatred, because in all these there is a concurrent affection of the body. Aristotle concludes that from all this it is clear that the affections of the soul are, as such, 'manifestations with a material component' (λόγοι ἐνυλοί).

Frede & Patzig (II, 211f.) too have to admit that *Met.* E 1, 1025b28-1026a6 and K 7, 1064a23-28, can be explained as showing that the definition of natural things cannot do without matter. They insist, however, that in the summary at the end of chapter 11 (1037a21ff.), Aristotle (a24-26) clearly asserts that a thing's material parts are alien from its definiens.

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<sup>110</sup> At the end of *Phys.* II (9, 200a30-b4), the important position of the material component of natural things and artefacts is discussed. If we define the function of a saw as being a certain kind of dividing, then this cannot come about unless the saw has teeth of a certain type. Now these must be of iron. Hence its definiens must contain some parts that are, as it were, its matter.

<sup>111</sup> Aristotle means to say that 'what is straight', when taken *in abstracto*, does not imply 'being a tangent' (\*'tangent-hood', so to speak). To be a tangent, 'the straight' should be taken as 'straight line', 'particularized' either as part of a particular geometrical construct ('this line here construed together with a sphere'), or as, say, an architectonic construction, e.g. in a decorated tympanum. In other words, that 'straightness' will coincide with 'tangency' depends on its being enmattered and, accordingly, particularized. Cleary's remark (1995, 317, and 106) that, in view of the familiar ambiguity about 'body', it is difficult to determine whether Aristotle means that the very notion of 'contact' implies sensible body or merely mathematical body seems to miss Aristotle's point. What Aristotle has in mind is to clarify when our conceptualization involves 'material constitution', and when not. Whether or not the material constitution concerns real or merely mathematical body is not Aristotle's point in this passage. Once again, the distinction between 'ambiguity' and 'ambivalence' is useful; my section 1.72. Note that for Aristotle, τὸ εὐθύ is to be interpreted along the same lines as τὸ σιμὸν; my section 9.32.

I think there is more to Aristotle's attitude towards Socrates the Younger in the above passage. Like Socrates, he rejects any inclusion of matter in a thing's form (εἶδος), but does not go so far as to straightforwardly reject the adoption of a composite thing's material components in its definiens. The conclusion of the summary (1037b4-7) should be understood along similar lines, meaning that a natural thing qua composed of form *and* matter should not be regarded as a coincidental compound of the 'educated Socrates' type, which cannot be defined at all, since the inclusion of matter in natural things (as in artificial things as well) is surely not incidental, and the form is an *enmattered* form (1037a28-29).<sup>112</sup>

#### 10. 75 *Two kinds of definiens to be distinguished*

The passages mentioned above strongly suggest that two kinds of definition should be carefully distinguished. One concerns the form taken by itself and presents a thing's quiddity (εἶδος); the other is about the composite of form and matter, or rather the form as enmattered.<sup>113</sup> In *Met.* H 2, where the constitution of natural compounds is under examination, we find this suggestion confirmed. Here Aristotle clearly opposes formal definitions to material ones, viz. those that focus on the form or actuality (τοῦ εἶδους καὶ τῆς ἐνεργείας) to the definitions covering the whole of the composite. (1043a12ff.)

It should be borne in mind that matter is never included in the definiens of εἶδος taken in the sense of the ontic form, as is claimed by Aristotle more than once; therefore a composite's material part is neither part of the *eidos* (form) nor of the definiens of the composite's *quiddity*. However, there is in Aristotle also an idea of matter so closely (if not essentially, yet at least in a stronger sense than just coincidentally, as we have seen) related to the forms of natural things that its inclusion in the definiens of the composite is most appropriate. In these cases, however, matter is still not the things' proper particular matter ('chunks of matter') found in each of them, but rather the general condition of what Ackrill has happily called

<sup>112</sup> Also *Met.* E 1, 1025b30-1026a6; Z 7, 1033a1-5 and b24-26; Z, chs 10-11; H 2, 1043a14-18; *Cael.* I 9, 277b30-278a6 and 23-25; *An.* I 1, 403a29-b16; *PA* I 4, 644a23-24: "Since the οὐσίαι are the ultimate forms (τὰ ἔσχατα εἶδη), and these are specifically indiscernible, such as Socrates, Coriscus ... etc."

<sup>113</sup> For the semantic ambivalence of εἶδος see my section 1.71.

‘material constitution’ (‘materiality’, i.e. a thing’s ‘being *somehow* enmattered’), which may be associated with each kind’s specific matter (such as the general condition of having flesh and bones for human and animal beings). Now this condition of ‘materiality’ is part of the definiens of the composite, though still not of its form, formally speaking.

Thus to Aristotle, for there to be both a particular man or a particular sphere, the general condition of material constitution should be implemented by some particular parcel of matter. The difference between these two is only that man and sphere have unequal options, because in fact the particular man’s matter is always flesh and bones, while the particular sphere’s matter is either bronze, or iron, stone or wood etc. *In fact* indeed, but *in principle* there could be other implementations of a man’s material constitution. As may be gathered from 1036b28ff., any sort of matter that matches man’s sentient nature can be admitted, providing, that is, it enables him to exercise the basic function implied in its being an αἰσθητικόν, viz. the ability to move itself.

These two kinds of definition — one of the quiddity or form taken by itself, the other of the composite of form and matter (which to Aristotle, equals ‘the enmattered form’) — tally with two different modes of abstraction. The first is what was later called ‘formal abstraction’ (‘abstractio formalis’), i.e. the mental operation by which all material constituents, including the material constitution as such (‘materiality’), are stripped off from the thing (e.g. man), so as to produce the form (forma) by itself (‘manhood’). By its counterpart, total abstraction (‘abstractio totalis’), on the other hand, a thing’s particular matter, but not its materiality as such, is stripped off, resulting in the notion of the whole of the composite (totum), e.g. the significate ‘man’, as the logical tool that can be applied to all members of the class. From the semantic point of view, the distinction concerns the formal and material significates.<sup>114</sup>

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<sup>114</sup> In Medieval semantics the distinction between ‘significatum formale’ and ‘significatum materiale’ is usually drawn concerning connotative terms (e.g. ‘album-albedo’), not in cases like ‘homo-humanitas’. E.g. Marsilius of Inghen (born near Nijmegen, in the Netherlands, and the first Rector of the University of Heidelberg, where he died in 1396) in his tract *De appellationibus*, 130<sup>2-16</sup> ed. E.P. Bos: “Significatum materiale dicitur res pro quo talis terminus connotativus supponit (“stands for”), ut li ‘albus’ pro homine habente albedinem supponit. [...] Hoc autem videtur esse de intentione Aristotelis quinto *Metaphysice* [Δ 6, 1016b32-33] dicentis ‘Eodem numero sunt quorum materia una est’, idest que supponunt pro eadem re. Ecce qualiter Philosophus secundum talem expositionem saltem,

10. 76 *The role of γένος in the constitution of natural things*

Besides coming up in connection with a thing's particularness, the inclusion of matter in the definiens is also discussed from another angle, viz. that of the role of genus in the constitution of natural things. As we have already seen, at Z 12, 1037b27-1038a8, Aristotle deals with the sort of definition which consists only of what is called the primary genus and the differentiae; for instance, man is defined as 'two-footed animal', which phrase consists of the ultimate genus 'animal' and the differentia 'two-footed'. In such cases, Aristotle claims, the genus does not in an unqualified sense (ἀπλῶς) exist apart from the genus, or exist only as matter. The underlying idea is that specific things, such as e.g. the various kinds of sound (vowel, sibilant, guttural) can be regarded as 'made of' sound as well as being different species of the generic concept 'sound'.<sup>115</sup> So one could look at things either way; but there is still a difference in that the genus viewed as 'matter' is the thing's ontic constituent, while the genus taken as superior to its different inferior species is only a logical tool. For this reason, there is a way in which the essential constituent of a natural thing may be seen as its material, which entails that the thing's definiens contains the general notion of material constitution.

In the Lexicon too, at *Met.* Δ 28, 1024b8-9, a thing's genus is called the matter or substratum of its differentia, "for what qualifying differentiae are of is their substratum, which we call their matter". Elsewhere in the *Metaphysics*, the constitutive position of the genus is described along similar lines:

*Met.* I 8, 1057b35-1058a8 and a21-25: A thing's property of being specifically different <from something else> lies in the difference that falls to some <third> entity, and this entity must belong to both. For

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que vocatur vera, capit 'materiam' pro isto pro quo supponit terminus. [...]. 'Significatum autem formale' dicitur res connotata per huiusmodi terminum. Unde significatum materiale huius termini 'album' dicitur res habens albedinem, puta [= i.e.] ipsum subiectum albedinis. Sed significatum formale est istud quod iste terminus connotat, puta ipsa albedo; *ibid.*, 132<sup>4-6</sup>: "... terminus pro isto significato quod appellat, non supponit, unde ('since') terminus supponit pro suo significato materiali, et appellat suum significatum formale". Another fourteenth-century philosopher, John Buridan (born presumably in Sint Omaars in the Southern Netherlands — nowadays St. Omer, France — who was professor at the Parisian Faculty of Arts, and died about 1361) distinguishes between the form and matter of terms (*De suppositionibus* 81<sup>14-25</sup> ed. R. van der Lecq).

<sup>115</sup> Bostock (182), who aptly refers to *Met.* B 3, 998a20-25 (where φωνή is called a genus), and *GA* V 7, 786b21, where it is called 'matter'.

instance, if there is talk of an animal that is specifically different <from another animal>, then both are animals. The things, thus, that are specifically different must be in the same genus. For by 'genus' I mean *that* one identical thing which is said of both and is differentiated in no merely incidental way, whether conceived as matter or otherwise. Not only, then, must what is common attach to the different things (e.g. not only must both be animals), but this very animalhood (τοῦτο αὐτὸ τὸ ζῶον) must also be different for each (e.g. in the one case equinity, in the other manhood), and so this common nature is specifically different for each from what it is for the other. One, then, will be in virtue of itself one sort of animal, and the other another, e.g. one a horse and the other a man. Now this difference must be a differentiation of the genus. For I call 'differentiation of the genus' the sort of otherness that makes the genus itself other.

[...]. Evidently, therefore, with regard to that which is called the genus, none of the species-of-a-genus is either identical with it or specifically different; and this is fitting, for the matter is indicated by means of an elimination (ἀποφάσει) <of the form>, and the genus is called the matter of that of which it is the genus [...] in the sense in which the genus is an element of the thing's nature.

As we have seen earlier, in *Met.* H, chs. 3 and 6, the discussion of the genus as a natural thing's material constituent, and, in keeping with this, the inclusion of the generic notion of 'materiality' in the definiens is on the same footing.<sup>116</sup>

#### 10.8 *Ancient and Medieval commentators on these issues*

When we read what is remarked upon by Ancient and Medieval commentators with regard to the three issues that are so controversial nowadays among Aristotle's interpreters, two things must strike us. Firstly, these issues were not then a matter of controversy, so we cannot but gather the implicit hints occurring at random in the texts. Secondly, the implicit hints found in their comments on the passages we have been discussing in the previous sections, clearly suggest that their understanding of these passages fits in well, or is at least never at variance with the position we have argued for in the above discussions. What should also catch the reader's attention is that in these interpretations the three themes — (1) the particular status of the enmattered form, (2) the enmattered form as *the* principle of individuation, and (3) the enmattered form being included in the definiens of the composite — are closely interwoven.

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<sup>116</sup> Pace Bostock (182; 267; 281-4; 287-90).

10. 81 *The Ancient commentators*

Porphyrus does not discuss the question whether the enmattered substantial form is particular or universal. As for the related question concerning the principle of individuation, we only find a few words about what role properties have when it comes to individuating Socrates, who is a unique individual owing to a collection of properties that as such is not found in any other individual. These particular properties are contrasted with those which are found in other individuals too, and so befall to man taken universally, because they belong to him in virtue of his being a man. The last sentence might be explained as concerning man's essential properties, but it seems plausible to take Porphyry claiming that a particular man's coincidental property of, say, whiteness or blackness is opposed to the general condition of being somehow coloured, which falls to man in general.<sup>117</sup>

Anyhow, when commenting on this passage, Boethius makes them refer to a particular's coincidental properties:

*In Isag. comm.*, p. 235<sup>9</sup>-236<sup>6</sup> ed. Brandt: Illa vero in quae commune dividitur, communi natura participant proprietatesque communis rei his quibus communis est convenit. At vero individuorum proprietas nulli communis est. Socratis enim proprietas, si fuit calvus, simus, propenso alvo ceterisque corporis lineamentis aut morum institutione aut forma vocis, non conveniebat in alterum. Hae enim proprietates, quae ex accidentibus ei obvenerant et eius formam figuramque coniunxerant, in nullum alium conveniebant. Cuius autem proprietates in nullum alium conveniunt, eius proprietates nulli poterunt esse communes; cuius autem proprietas nulli communis est, nihil est quod eius proprietate participet. [...] Recte igitur haec quorum proprietas in alium non convenit, individua nuncupantur. At vero hominis proprietas, idest specialis, convenit et in Socratem et in Platonem et in ceteros, quorum <vero> proprietates ex accidentibus venientes in quemlibet alium singularem nulla ratione conveniunt.

<sup>117</sup> Porphyry CAG IV-1, p. 721-27: ἄτομα οὖν λέγεται τὰ τοιαῦτα, ὅτι ἐξ ιδιοτήτων συνέστηκεν ἕκαστον, ὧν τὸ ἄθροισμα οὐκ ἂν ἐπ' ἄλλου ποτὲ τὸ αὐτὸ γένοιτο· αἱ γὰρ Σωκράτους ιδιότητες οὐκ ἂν ἐπ' ἄλλου τινὸς τῶν κατὰ μέρος γένοιτο ἂν αἱ αὐταί, αἱ μέντοι τοῦ ἀνθρώπου, λέγω δὴ τοῦ κοινοῦ, ιδιότητες γένοιτο' ἂν αἱ αὐταί ἐπὶ πλειόνων, μᾶλλον δὲ ἐπὶ πάντων τῶν κατὰ μέρος ἀνθρώπων, καθὼς ἄνθρωποι. This view became common doctrine in the Middle Ages through Boethius's translation (*Aristoteles latinus*, p. 13<sup>24</sup>-14<sup>6</sup>): "Individua ergo dicuntur huiusmodi quoniam ex proprietatibus consistit unumquodque eorum quorum collectio numquam in alio eadem erit; Socratis enim proprietates numquam in alio quolibet erunt particularium; hae vero quae sunt hominis (dico autem eius qui est communis) proprietates erunt eadem in pluribus, magis autem et in omnibus particularibus hominibus in eo quod homines sunt".

Discussing (CAG IV-1, p. 129<sup>4ff.</sup>) the difference between ἕξις and διάθεσις, Porphyry comes also to speak about the numerical difference between Socrates and Plato, saying (129<sup>9-10</sup>) that this difference is not caused by their ‘differentiae specificaе’ (εἰδοποιούσας διαφοραῖς), but by the individual character resulting from the concurrence of certain qualities (ιδιότητι δὲ συνδρομῆς ποιότητων).<sup>118</sup> Thus it is plain (as it is indeed most likely) that it is the concurrence of coincidental properties which individuates, rather than the combination of a thing’s essential components making up the complete ousia (τὰ συμπληροῦντα).

We may gather from these texts, which can be viewed as fairly representative of the Ancient Commentators’ tradition, that it was common doctrine to take not matter, but non-substantial forms as the principles of individuation, and that these forms are particular forms. It is hardly possible, to say the least, that they should have considered the substantial forms to be universal. These commentators were fully aware, I take it, that one has to distinguish between the particular man, Socrates, and the logical tool ‘man’ which can be applied to each member of the class, and, accordingly, between Socrates’s individual unique collection of (coincidental) properties and the general properties of being affected in such-and-such a way, which may be shared universally, i.e. by all members of a class. Finally, we should take into consideration that no collection of properties can possibly be viewed as unique unless they are taken as strictly individual forms belonging to this or that particular, and to nobody else.

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<sup>118</sup> CAG IV-1, p. 129<sup>6-10</sup>: Ὡς μὲν εἶδη ἀλλήλων οὐ διενήνοχεν ὥσπερ ὁ ἄνθρωπος τοῦ βοός· οὐ γὰρ διαφέρει ἀλλήλων εἰδοποιούσας διαφοραῖς ὥσπερ ὁ ἵππος τοῦ ἀνθρώπου. ἀριθμῶ δὲ ἀλλήλων διενήνοχεν ὥσπερ Σωκράτης Πλάτωνος· εἰδοποιούσας μὲν γὰρ διαφοραῖς οὐ διενήνοχεν Σωκράτης Πλάτωνος, ιδιότητι δὲ συνδρομῆς ποιότητων, καθ’ ἣν εἰκότως [my guess; εἰδοποιῶ Mss.] διενήνοχεν Πλάτων Σωκράτους. Cf. *ibid.*, p. 11<sup>12-17</sup>: τῶν γὰρ πραγμάτων ἐξ ὕλης καὶ εἶδους συνεστώτων ἢ ἀνάλογόν γε ὕλη καὶ εἶδει τὴν σύστασιν ἐχόντων, ὥσπερ ὁ ἀνδριὰς ἐξ ὕλης μὲν τοῦ χαλκοῦ, εἶδους δὲ τοῦ σχήματος, οὕτως καὶ ὁ ἄνθρωπος ὁ κοινός τε καὶ εἰδικὸς ἐξ ὕλης μὲν ἀναλόγου συνεστήκεν τοῦ γένους, ἐκ μορφῆς δὲ τῆς διαφορᾶς, τὸ δὲ ὅλον τοῦτο, ζῶον λογικὸν θνητόν, ὁ ἄνθρωπος, ὡς ἐκεῖ ὁ ἀνδριὰς. In Boethius’s translation (*op. cit.*, p. 18<sup>9-15</sup>): Rebus enim ex materia et forma constantibus vel ad similitudinem materiae specieque constitutionem habentibus: quemadmodum statua ex materia est aeris, forma autem figura, sic et homo communis et specialis ex materia quidem similiter consistit genere, ex forma autem differentia, totum autem hoc, animal rationale, homo est, quemadmodum illic statua. Matthen convincingly argues (1988a, 156f.) that Aristotle is “embracing a version of the view that individual substances are ‘bundles’ of individual attributes”.

10. 82 *The Arab commentators Avicenna and Averroes*

Avicenna (Ibn Sina, 980-1037) distinguishes three different statuses of the form, viz. (1) the form taken by itself, quite apart from *either* its being enmattered in this or that particular *or* its being taken as a universal applicable to different particulars, (2) the particular form taken as enmattered in this or that particular, and (3) the form taken when it is abstracted from particulars and thus endowed with universality.<sup>119</sup>

Averroes (Ibn Rushd, 1126-98), who because of his great merits as a commentator of Aristotle was antonomastically called by the Medieval authors 'The Commentator', clearly took the immanent forms as particular, denying all 'universalia' any real existence outside the mind, as we can see from some unmistakable quotations from the Latin version of his works.

Dealing with famous metaphysical errors at the beginning of his commentary on Aristotle's *Metaphysics*, Averroes qualifies the universal's mode of being as solely 'being known': "Universale enim non habet esse nisi secundum quod est scientia". And Aristotle claiming in the proemium to *De anima* (I 1, 402b7-8) that animal taken universally either is nothing or is posterior is commented upon by Averroes as showing that Aristotle is of the opinion that universality is entirely due to the intellect ("intellectus est qui agit universalitatem in eis").<sup>120</sup> His comments on *Met. Z* 6, 1031a18-19, testify to his clear understanding that it is precisely the immanent form being strictly individual that makes Aristotle claim the real coincidence of Socrates and his quiddity:

*In Arist. VII Metaph. cap. 20, comm. 18, fol. 169 F: singulare nihil aliud est quam substantia cuius est, scilicet quidditas eius; et etiam econverso, scilicet quod substantia quae est quidditas, est substantia singularis. Verbi gratia, Socrates est animal rationale; Socrates enim nihil aliud est quam animalitas et rationalitas quae sunt quidditas eius, nec animalitas et rationalitas sunt quidditas alicuius nisi Socratis et Platonis.*

These texts clearly show that the Arab commentators too viewed the immanent forms as particular, and, in spite of the fact that their likes

<sup>119</sup> See the various references to Avicenna in Jean Paulus, *Henri de Gand, Essai sur les tendances de sa métaphysique*, Paris 1938, where the Avicennian distinctions are discussed (esp. 220-42) as coming to the fore in Henry of Ghent.

<sup>120</sup> Quoted from the Latin version, *In Arist. I De anima comm.*, ch. 8, Sup. II, fol. 4 C. For Buridan's vivid comments upon this statement see my section 10.84.



may be found in other instances — to each of which they belong as equally strictly individual — their possible commonness is entirely due to the mind's consideration of their similitudes. Incidentally, as for matter's indefinability, Averroes holds a rigorous view, which comes rather close to the position maintained by Frede and Patzig.

### 10. 83 *Thomas Aquinas*

In his comments on *Met.* Z 10, Thomas Aquinas (1225-74), who is one of the most reliable Medieval commentators on Aristotle, points out that we speak of the composite 'man' in two senses, taking it either as a universal concept, or as a particular thing. And that is why, he says, Aristotle claims that 'man' and 'horse' and the like, which are present in the particulars, are (if they are taken universally) not 'substantiae' in the sense of 'formae', but certain wholes composed of a determined matter and a determined form; in that case, however, these constituents are not taken in their singularity, but qua universally applicable. For 'man' signifies something that is composed of soul and body, but not of *this* soul and *this* body. But speaking of a 'singular' we mean something which is composed of the ultimate matter, individual matter, that is; for Socrates is something composed of *this* soul and *this* matter.<sup>121</sup>

Hence matter is part of the 'species', by which term a thing's complete essence or quiddity composed of form *and* matter is understood, not the form on its own.<sup>122</sup> Next, Z 10, 1035b31-1036a12, is commented upon along the same lines. It is the material constitution or materiality as such ("materia communiter sumpta" or "materia communis") that should be included in the definiens:

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<sup>121</sup> *In Arist. Metaph.* VII, nr. 1490 ed. Marietti: "Sciendum tamen quod hoc compositum quod est animal, vel homo, potest dupliciter sumi: vel sicut universale, vel sicut singulare. Sicut universale quidem sicut homo et animal, sicut singulare ut Socrates et Callias. Et ideo dicit quod homo et equus et quae ita sunt in singularibus, sed universaliter dicta (sicut 'homo' et 'equus') "non sunt substantia" [1035b29], idest non sunt solum forma, sed sunt simul totum quoddam compositum ex determinata materia et determinata forma; non quidem ut singulariter, sed universaliter. 'Homo' enim dicit aliquid compositum ex anima et corpore, non autem ex hac anima et hoc corpore. Sed 'singulare' dicit aliquid compositum "ex ultima materia" [1035b30], idest materia individuali. Est enim Socrates aliquid compositum ex hac anima et hoc corpore. Et similiter est in aliis singularibus".

<sup>122</sup> *Ibid.*, nr.1491: "Sic igitur patet quod materia est pars speciei. Speciem autem hic intelligimus non formam tantum, sed quod quid erat esse". For the twofold meaning of 'εἶδος'-species' see Frede & Patzig II, 236f.

*In Arist. Metaph.* VII, nr. 1492: Ostendit [sc. Aristoteles] quae partes debeant poni in definitione. Cum enim ostensum sit quae partes sunt speciei et quae partes individui, quia materia communiter sumpta est pars speciei, haec autem materia determinata est pars individui, — manifestum est quod solum illae partes sunt partes rationis [= ‘of the definiens’] quae sunt partes speciei, non autem quae sunt partes individui. In definitione enim hominis ponitur caro et os, sed non haec caro et hoc os. Et hoc ideo quia ratio definitiva non assignatur nisi universaliter.

Aquinas’s comments on the passage wind up by emphasizing two things. First, no individual material parts can ever be parts of the complete essence, let alone of the form itself. Second, the parts of a thing’s matter taken universally (as the general condition of materiality, that is) *are* parts of the complete essence and, consequently, of the definiens of the composite thing, but are surely not parts of the form by itself:

*Ibid.*, 1497: [...] Partes enim materiae individuae sunt partes compositi singularis, non autem speciei nec formae. Partes autem materiae universalis sunt partes speciei, sed non formae. Et quia universale definitur et non singulare, ideo partes materiae individualis non ponuntur in definitione, sed solum partes materiae communis simul cum forma vel partibus formae.

In his theological *Summa*, Aquinas rejects the position held by Averroes, who claimed that matter is not part of a thing’s essence, not even of its complete essence; it is only part of the particular thing. In his answer Thomas has another opportunity to explain what he understands by ‘matter taken universally’. He sets it off from the ‘marked or adorned matter’ (‘materia signata’), which is the principle of individuation:

*Summa theologiae* I, q. 75, art. 4 c: [...] quidam posuerunt [e.g. Averroes, *In VII Metaph.*, comm. 34] solam formam esse de ratione speciei, materiam vero esse partem individui, et non speciei. Quod quidem non potest esse verum. Nam ad naturam speciei pertinet id quod significat definitio. Definitio autem in rebus naturalibus non significat formam tantum, sed formam et materiam, unde [= ‘because’] materia est pars speciei in rebus naturalibus. Non quidem materia signata, quae est principium individuationis, sed materia communis. Sicut enim de ratione huius hominis est quod sit ex hac anima et his carnibus et his ossibus, ita de ratione hominis est quod sit ex anima et carnibus et ossibus.

Elsewhere in the *Summa*, the difference between the complete essence and the composite (here called ‘suppositum’, i.e. the concrete thing itself) informed by the form or essence is explained in terms of

the role matter has in natural things composed of form and matter. There is also an allusion to the later distinction between formal and material significate:

*Ibid.* I, q. 3, art. 3 c: [...] in rebus compositis ex materia et forma necesse est quod differant natura (vel essentia) et suppositum, quia essentia vel natura comprehendit in se illa tantum quae cadunt in definitione speciei, sicut humanitas comprehendit in se ea quae cadunt in definitione hominis; his enim homo est homo; et hoc significat ‘humanitas’, hoc scilicet quo homo est homo. Sed materia individualis cum accidentibus omnibus individuans ipsam,<sup>123</sup> non cadit in definitione speciei; non enim cadunt in definitione hominis hae carnes et haec ossa, aut albedo vel nigredo, vel aliquid huiusmodi, unde hae carnes et haec ossa et accidentia designantia hanc materiam, non includuntur in humanitate. Et tamen, in eo quod est homo includuntur, unde id quod est homo habet in se aliquid quod non habet humanitas. Et propter hoc non est totaliter idem homo et humanitas, sed humanitas significatur ut pars formalis hominis, quia principia definientia habent se formaliter respectu materiae individuantis.

In *quaestio* I, 85 of the same work, in which the operation of the intellect is examined, Thomas relates an objection to the effect that the mental operation of abstraction should strip off any material constituent of a natural thing, so that the sole form is left. In keeping with the previous exposition, Aquinas explains how the intellect manages to properly define sensible things by abstracting the thing’s complete essence, stripping off its particular materials, but including the general condition of materiality in its definiens:

*Ibid.*, I, q. 85, art. 1, ad 2<sup>um</sup>: [...] quidam putaverunt quod species rei naturalis sit forma solum et quod materia non sit pars speciei. Sed secundum hoc, in definitionibus rerum naturalium non poneretur materia. Et ideo aliter dicendum est quod materia est duplex, scilicet communis, et signata vel individualis; communis quidem, ut caro et os; individualis autem, ut hae carnes et haec ossa. Intellectus igitur abstrahit speciem rei naturalis a materia sensibili individuali, non autem a materia sensibili communi; sicut speciem hominis abstrahit ab his carnibus et his ossibus, quae non sunt de ratione speciei, sed sunt partes individui, ut dicitur in VII *Metaphysicae* [Z 10, 1035b33-1036a13], et ideo sine eis considerari potest. Sed species hominis non potest abstrahi per intellectum a carnibus et ossibus [i.e. from its being enmattered in flesh and bones].

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<sup>123</sup> This sentence implies that a thing’s matter is individuated by its accidental forms, not that matter as such is the principle of individuation. Cf. also Thomas’s speaking of ‘marked matter’ (‘materia signata’), i.e. matter adorned by substantial and accidental forms, as the principle of individuation.

In the same *quaestio* the author explains that the universal produced by the mental operation of abstraction, in point of fact contains two elements. It denotes first a thing's real nature, which is the proper object of the mental operation, but by the same token, there is also a reference to the abstract status in which the real nature is presented to the (possible) intellect.<sup>124</sup> He claims that the thing's nature or form only exists in the outside particulars, whilst universality is in the intellect only. From this explanation we may infer that to Aquinas, the enmattered form is particular, not universal. The ontic form, manhood (*humanitas*), which from the semantic point of view is the referent of the formal significate of the abstract term 'humanitas', is only found in this or that individual human being, whereas the corresponding 'universal' is merely an abstract logical tool produced by the intellect:

*Ibid.*, art. 2, ad 2<sup>um</sup>: [...] cum dicitur 'universale abstractum', duo intelliguntur, scilicet ipsa natura rei, et abstractio seu universalitas. Ipsa igitur natura, cui accidit vel intelligi vel abstrahi (vel intentio universalitatis), non est nisi in singularibus, sed hoc ipsum quod est intelligi vel abstrahi (vel intentio universalitatis) est in intellectu. [...]. Similiter *humanitas*, quae intelligitur, non est nisi in hoc vel illo homine. Sed quod *humanitas* apprehendatur sine individualibus conditionibus (quod est ipsam abstrahi, ad quod sequitur intentio universalitatis), accidit *humanitati* secundum quod percipitur ab intellectu, in quo est similitudo naturae speciei, et non individualium principiorum.

In his metaphysical tract *De ente et essentia*, Aquinas explains that the principle of individuation is not just matter, but the *materia signata* or the matter already somehow marked, by substantial or coincidental forms, that is. At the same time he implicitly shows that he views the enmattered form as a *particular* form or complete essence, and he claims that it also has a universal status, i.e. as a logical tool, being the thing's *definiens*, in which the 'materia signata' (and thus enmattered forms somehow acting) is the principle of individuation:

*De ente et essentia*, cap. 2, nr. 7 ed. Marietti: Sed quia individuationis principium est materia, ex hoc forte videtur sequi quod essentia, quae

<sup>124</sup> The abstraction is accomplished by the active intellect; see Aquinas, *Summa theol.* I, q.12, art.13c, and q. 85, art. 1, as 1<sup>um</sup>, 3<sup>um</sup>, 4<sup>um</sup>, 5<sup>um</sup>. In point of fact, the young Thomas, at least, and especially his contemporary, Henry of Ghent, as well as most philosophers from the Franciscan School, followed Avicenna in distinguishing three statuses of the form: (a) taken by itself, it is neither universal nor individual; (b) as enmattered, it is individual; and (c) when abstracted from the particulars, it is universal; see my previous section.

in se materiam complectitur simul et formam, sit tantum particularis, et non universalis. [...]. Et ideo sciendum est quod materia non quolibet modo accepta est individuationis principium, sed solum materia signata; et dico materiam signatam quae sub determinatis dimensionibus consideratur. Haec autem materia in definitione hominis inquantum est homo non ponitur (sed poneretur in definitione Socratis, si Socrates definitionem haberet). In definitione autem hominis ponitur materia non-signata; non enim in definitione hominis ponitur hoc os et haec caro, sed os et caro absolute, quae sunt materia hominis non-signata.

Meanwhile it should be recognized that sometimes the claim that the forms, even though they only exist qua particulars, are susceptible to what Aquinas calls the 'intentio universalitatis', goes together with regarding matter as the principle of individuation. However, it is clear from the context that the individual matter as marked by formal individuating elements ('principia individuantia') is meant. It becomes clear, time and again, that, somewhat confusingly, the particular immanent form is called a 'universale'. However, it earns this label only because it can be submitted to abstraction, whereas in so far as it is enmattered here and now, it is *not* susceptible to abstraction:

*In Arist. II De anima comm.*, nrs. 378-380 [*ad De anima* II 5, 417b20ff.]: [...]. considerandum est quod universale potest accipi dupliciter. Uno modo potest dici universale ipsa natura communis, prout subiacet intentioni universalitatis, alio modo secundum se. [...]. Ista autem natura cui advenit intentio universalitatis, puta natura hominis, habet duplex esse: unum quidem materiale, secundum quod est in materia naturali, aliud autem immateiale, secundum quod est in intellectu. Secundum igitur quod habet esse in materia naturali, non potest ei advenire intentio universalitatis, quia per materiam individuatur. Advenit igitur ei universalitatis intentio secundum quod abstrahitur<sup>125</sup> a materia individuali. Non est autem possibile quod abstrahatur a materia individuali realiter, sicut Platonici posuerunt. Non enim est homo naturalis, idest realis, nisi in his carnibus et in his ossibus, sicut probat Philosophus in VII<sup>o</sup> *Metaphysicae*. Relinquitur ergo quod natura humana non habet esse praeter principia individuantia nisi tantum in intellectu. [379] [...] Non [...] apprehendit [...] intellectus [...] quod natura communis sit sine principiis individuantibus, sed apprehendit naturam communem, non apprehendendo principia individuantia. [380]. Sic igitur patet quod naturae communi non potest attribui intentio universalitatis nisi secundum esse quod habet in intellectu. [...] Et propter hoc nomina communia significantia naturas ipsas praedicantur de individuis, non autem nomina significantia

<sup>125</sup> The subject is the particular form, not the particular thing.

intentiones. Socrates enim est homo, sed non est species, quamvis homo sit species.

Unlike most modern commentators on Aristotle, Aquinas quite remarkably maintains a clear distinction between the particular form qua enmattered (and, as such alien to universality and irrespective of the incidental circumstance that it is, or may be, found in other instances) on the one hand, and the same form after its individuating principles have been stripped away by abstraction, on the other.

#### 10. 84 *John Buridan*

The fourteenth-century Parisian university professor, John Buridan (d. about 1361), who wrote extensive commentaries (most of them in several versions as a result of his longstanding practice as a university teacher) on the greater part of Aristotle's works, has also left two commentaries on the *Metaphysics*, one in the form of a running commentary (*Expositio*), the other as a collection of quaestiones on selected themes and problems. On account of the question whether a thing's matter should be included in its definiens, we read in Buridan's *Expositio* (which has not been edited so far) re *Met. Z* 10, 1036alff. his view of the subject-matter, which, as is usual with Buridan, is presented in terms of his own semantics and epistemology. As a terminist logician, Buridan is in the constant habit of reducing questions found in Aristotle and most of his commentators to semantic issues.

First, he states that particulars cannot be defined, even if we were to frame, using the Russellian label, 'definite descriptions', since they are useful for denoting things, but cannot offer a proper definition required for true knowledge:

*Expos. in Arist. Metaph.* (quoted from Ms. Erfurt F. 322, fol.125vb): Hic ostendit quod partes ipsius singularis non ponuntur in diffinitione totius, hoc est dictu quod nomina significantia singulariter partes alicuius totius non ponuntur in diffinitione nominis significantis totum. [...] Et Aristotiles hoc intendit probare, scilicet quod singulare non sunt diffinitiones. Primo quia [= 'First with this argument']: Res significate per terminos singulares eiusdem speciei non possunt cognosci diffinitive nisi per extranea illis singularibus; quibus circumscriptis [= 'these being taken away'], non minus illi termini significant ea que significant. Ergo oporteret in diffinitione singulare, ad differentiam unius ab altero, ponere extranea. Quibus ablatis, non auferretur terminus singularis, nec eius significatio vel suppositio. Igitur. Secundo quia: Non possunt res singulariter cognosci nisi

cognoscantur per modum existentis in prospectu cognoscentis. Ideo, si non sensi Sortem,<sup>126</sup> non diceres michi, nec posses dicere, quid debeam intelligere per ‘Sortem’ nisi per terminos communes, quorum cognitio sive significatio ita bene convenit alteri sicut Sorti, si alter generaret ut in omnibus circumstantiis ipsi Sorti. Ideo haec non esset diffinitio Sortis, quia non esset propria nec convertibilis.

Concerning the passus 1036a26ff. Buridan rephrases (fol. 126ra) the problem about material parts as follows: “Cum dictum sit quod partes materiales non ponuntur in diffinitione totius, sed formales, et quod etiam speciei est diffinitio, et non ipsius singularis — restat dubitatio que sint partes speciei, et que singularis; similiter et que sint partes materiales et que formales”. He first states (fol. 126rb) that the rigorous discarding of any material constituent from a thing’s definiens will not do, because in the case of natural substances sensation does not perceive the form alone, but rather the composite of matter and form: so both pertain to the proper definiens of the species. The comparison drawn by Socrates the Younger, — who, incidentally, is identified as Plato himself (“Socrates junior, idest Plato, qui sic vocabatur, quia erat discipulus Socratis”) — is rejected; but, none the less, both man and circle are said to be defined in accordance with their general condition of ‘materiality’, which may be implemented by any adequate materials. Of course, Buridan’s statement is framed semantically, in terms of terminist logic:

*Ibid.*, fol. 126rb: [...] sed oportet tales termini diffiniri per materiam secundum talem conceptum communem, secundum quod iste conceptus sit communis omnibus materiis ex quibus potest fieri circulus, vel ex quibus potest fieri homo.

Commenting upon 1037a5, Buridan rephrases Aristotle’s conclusion in his own vocabulary, saying that matter enters both the thing’s definiens and the significate of common terms. So both form *and* matter are signified as well as the composite, to wit both in the way in which particulars (‘singularia’) are signified and in that which is used to designate them logically, as universals. It is only in their universal status that the particular things are definable:

*Ibid.*, fol. 126va: PALAM AUTEM. Hic ex dictis infert principalem intencionem, scilicet quod termini communes non solum significant formam, ymo etiam compositum, unde (= ‘because’) tam materia quam forma quam etiam compositum significantur, et singulariter et

<sup>126</sup> From the thirteenth century onwards, the Medieval authors use the name ‘Sortes’ as a fictive person only appearing in examples, where earlier commentators used the name of the historical Socrates.

universaliter. Et secundum significationes singulares non diffiniuntur nec ponuntur in diffinitionibus, sed bene secundum universales.

In a special tract on the difference between the universal and the individual, Buridan clearly distinguishes between the particular status of the real enmattered form and its universal status in our mind as a logical tool. One of his numerous arguments refers to the *De caelo* passage discussed above, which is all the more interesting because the Medievals believed there in fact existed, and could exist, only one sun, one moon, one universe — so that the universal status could not possibly be seen as real:

*Tractatus de differentia universalis ad individuum*, pars secunda, p. 151 ed. Szyller (in classical orthography): [...] universale ut distinguitur ab individuis est aptum natum praedicari de pluribus sive reperiri in pluribus, sed non est aptum natum reperiri in pluribus praeter animam. [...] sol, luna, mundus, deus et huiusmodi sunt universalia; differt enim 'caelum' et 'hoc caelum' sicut differt universale et individuum, ut patet I<sup>o</sup> *Caeli* [9, 278a13-15], et ibi capitur 'celum' pro mundo. [...] constat quod sol non est natus praeter animam esse in pluribus, quia talis potentia vel aptitudo esset frustra, cum numquam reduci posset ad actum. [...] sed forte diceret quod non est ibi aptitudo vel potentia positiva, sed non repugnantia. Sed hoc non valet, quia oportet istam non-repugnantiam nihil esse praeter animam omnino. [...] Et credo quod ibi est repugnantia, cum impossibile sit esse plures soles aut plures mundos, et specialiter nullus debet dubitare quin in re repugnat esse plures deos.

In his comments on Averroes's dictum "intellectus est qui agit universalitatem", Buridan goes on to deal with people — young and possibly even elderly men, he ironically adds — who have difficulties with it. However, it is not any doubt about the particular status of the enmattered form which heavily troubles them, but what Aristotle has himself called (*Met.* B 4, 999a24-25), Buridan remarks, the most intractable and urgent of all problems, viz. how to obtain true knowledge of what is individual and thus indefinite. Buridan is ready to solve their problem, which he first sketches, including their arguments:

*Ibid.*, p. 166: Haec sunt verba Commentatoris. Sed multi iuvenes, vel forte senes, valde dubitant in hoc loco, non considerantes modum per quem intelligimus res ipsas. Quando enim dico 'homo est animal rationale', ipsa res singulariter existens quae definitur non est determinate Socrates vel Plato, quia, istis corruptis, remanet adhuc definitio,<sup>127</sup> nec illa res est omnes homines qui nunc sunt quidem, quia

<sup>127</sup> Ista definitio, i.e. that which is signified by the definiens.



post omnium istorum corruptionem adhuc remanebit ista definitio propter aliorum generationem; etiam, solo homine existente, ista definitio salvaretur. Nec illa res est omnes homines qui nunc sunt et qui erunt, quia illi qui erunt non sunt. Et sic ibi definiretur indifferenter ens et non ens; quod est irrationabile.

Dicendum est quod intellectus non intelligit res habendo eas in prospectu, sed intelligit eas per signum manens post rei absentiam, vel omnino post rei corruptionem, scilicet per phantasma vel per speciem intelligibilem. Ideo per huiusmodi phantasma potest idem conceptus causari in anima, sive res sit, sive non sit. [...] Si ergo conceptus fuerit per speciem praecisam ab extraneis [i.e. 'abstracted' from the extraneous material appurtenances], tunc non magis significabit individuum a quo causabatur quam quodlibet aliorum, sed indifferenter significabit quodlibet individuorum.

Buridan more than once points out that even though two individuals, like Socrates and Plato, are specifically the same, they nevertheless differ 'essentialiter'<sup>128</sup> or 'seipsis', i.e. qua distinct concrete beings; this distinction seems to include both their substantial and coincidental forms:

*Ibid.*, p. 174: [...] forma Socratis non est forma Platonis essentialiter, quia forma Socratis essentialiter corrumpitur vel generatur, forma Platonis non corrupta vel generata. Ergo illae duae formae essentialiter distinguuntur. [...] istae formae diversificantur in re: aut ergo essentialiter, aut solum accidentaliter. Si dicas: essentialiter, tunc habebo propositum ['then I will have made my point, viz. that they differ 'essentialiter']. Si dicas quod accidentaliter solum, tu non dicis hoc nisi quia sunt eiusdem speciei. Sed tunc pono ['assume, for the sake of argument'] quod Socrates et Plato sint omnino similes in accidentibus, ita quod omnia accidentia unius sint eiusdem speciei cum omnibus accidentibus alterius, et sint in eisdem locis secundum speciem. Tunc quero de primis accidentibus<sup>129</sup> quibus isti primo sint accidentaliter diversi, quomodo ipsa sunt diversa. Et oportet dicere quod seipsis, et hoc est dicere: essentialiter; et tamen sunt eiusdem speciei (per positum). Ergo similiter, si Socrates et Plato sint eiusdem speciei, hoc non obstat quin sint essentialiter diversi. Et sicut dico de formis istis, sic etiam verum est de omnibus quae sunt in Socrate et in Platone. De quolibet enim quod est in Socrate verum est dicere quod non est essentialiter aliquid de eis quae sunt in Platone. Immo, si Socrates omnino annihilaretur, adhuc remaneret Plato, et omnia quae in eo sunt, saltem absoluta.

<sup>128</sup> From the twelfth century onwards, the term 'essentia' is used to indicate an individual in its being *this* or *that* concretum, in its own factual *esse*, but this taken together with a strong connotation of its complete being, including its essential nature. See De Rijk (1981), 19-24.

<sup>129</sup> I.e. their quantity and quality.

In conclusion, Buridan deals with a final objection to the effect that the difference between Socrates and Plato is only numerical, and the unity following from their not differing specifically is to be explained in terms of specific indivisibility. This objection is nullified by showing that the specific similitude, even if it is understood as founded in reality, still does not imply that they are informed by numerically the same (universal) form. Rather the specific unity admits of a numerical difference between their immanent forms which is not surpassed by that between the individuals, Socrates and Plato themselves:

*Ibid.*, p. 176: Sed tu diceres statim quod illa unitas est bene divisa numeraliter in Socrate et Platone, sed est in eis omnino indivisa secundum speciem. Illud nihil est, quoniam: Ly 'secundum speciem' vel dicit aliquid animae, vel dicit aliquid praeter animam in Socrate et Platone. Si dicit aliquid animae, hoc est quod ego volo. Si dicit aliquid praeter animam in Socrate et Platone, tunc oportet, ut prius, quod illud 'secundum speciem' sit aliud in Socrate et aliud in Platone secundum numerum. Et sic habebō quod ista unitas et illud 'secundum speciem' habebit tantam distinctionem in Socrate et Platone quantam habent inter se Socrates et Plato, et quaecumque alia quae numero distincta sunt, et non specificē.

Plainly, the fact that there is a numerical difference between their respective enmattered forms of manhood, whiteness, fairness, and so on, entails that these forms are particular forms, not universal ones.

## CHAPTER ELEVEN

### ACTUAL AND POTENTIAL BEING. THE MATHEMATICALS

In the opening lines (1045b27-1046a4) of the first chapter of Book Θ, Aristotle makes clear for what purpose the issue of potentiality and actuality will now be addressed, and he announces the *modus procedendi*. First we are reminded of the primary sense of ‘be’ found in the ten categorial modes, and the predominant position of ‘subsistent entity’ among them. Next, the author states that one way to divide things is by making use of the distinctive modes of ‘be’ according to the scheme of the ten categories, and another is by employing the notions of ‘actual’ and ‘potential’. He then proposes to deal with potentiality and act by explaining what is meant by δύνάμις in the conventional sense, which is mainly found in daily usage,<sup>1</sup> namely ‘power’ taken as the agent of processes of change. After having treated (chs. 1-5) the several uses of δύνάμις as corresponding to κίνησις (‘motion’, ‘change’), although they are not “the most useful for our present purpose” (b36-a1),<sup>2</sup> the discussion of actuality will throw light on precisely what should be understood by the sort of δύνάμις (‘potentiality’) that does serve our present purpose.

Enumerating the different senses of ‘be’ (‘coincidental’, ‘true’, and ‘potential-actual’) in E 2, 1026a33ff., Aristotle had already properly assessed actuality and potentiality by clearly suggesting that these notions all cover, and modify, as it were, the other ways in which the outside things can be said to *be*:

*Met.* E 2, 1026a33-b2: Since that which is, in the precise sense of ‘what *is*’, is addressed as ‘be-ing coincidentally’, ‘be-ing as true’ [...] and,

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<sup>1</sup> I think this to be the meaning of ἢ λέγεται μὲν μάλιστα κυρίως (1045b35-36), rather than a reference to the word’s strictest sense.

<sup>2</sup> The chapters 1-5 are commented upon by Ross (II, 240-9), Reale (II, 62-75), and quite extensively in Burnyeat II, 46-124, including some pertinent notes on important details, including G.E.L. Owen (46-8) on δυνατόν and δύνάμις, and (52-4) on λόγος as δύνάμις τῶν ἐναντίων, on the Megarians (58-61); Sarah Waterlow on Time and Modality in *Cael.* I, 12 (69-92), esp. 92-6 (incidentally, Waterlow’s interpretation is also discussed by Van Rijen (1989), 82-7, in the context of his own interpretation of *Cael.* I, 12; *ibid.*, 73-102); and Richard Sorabji: “Five Philosophical Issues Arising from *Met.* Θ, chs. 4 & 5”, 118-24.

apart from these two, 'be-ing in the categorial modes [...] again, apart from all these (παρὰ τὰὐτὰ πάντα), 'be-ing potentially and actually'.

It is quite natural, then, that, once the true ousia has been identified (in Z-H) as the enmattered form (εἶδος), which is found in the compounds as named ('appellated') after the categories, Aristotle should now proceed to examine categorial being under the aspect 'potential-actual'.<sup>3</sup> And this is precisely what he is going to undertake in chapters 6-9 of book Θ.

But what about Θ 10? As will be shown presently, the link both with Θ, chs. 6-9, and Z-H is obvious. By analogy with the one about act and potentiality, there should be a discussion concerning the notion 'true' with reference to the diverse categorial modes of 'be', subsistent being in particular. In E 4, the claim of 'be-ing qua stated as true' for the denomination 'true ousia' was undermined and rejected, since it is merely a mental construal about real things. But it was recognized at the same time that, with regard to 'simples', i.e. the 'what-things-are', in reality, there is not something of the 'qua stated as true' type, because the latter type concerns compounds, viz. of form and matter, not 'simples'. In the case of 'simples' there is 'true' (and 'false') in another sense. Now "whatever we have to study with regard to 'what *is*' and 'what *is not*' in the manner of the 'simples', will have to be studied later", Aristotle announced (1027b27-29).

This promise, then, will be redeemed in Θ 10, where the two types of truth, 'ontic truth', and the foregoing 'truth *qua* stated in mind' or 'apophantic truth', are contrasted. And, because ontic truth lacks a proper counterpart (\*ontic falsehood, as it were), it is obvious that it must be something different from apophantic truth, whose nature is notably disclosed by contrasting it with its counterpart, statemental falsehood. In other words, ontic truth is a real feature of 'what *is*', and whenever the simple 'what is' of things — whether focussed on in its subsistency or after any coincidental mode of being — is under examination, we *eo ipso* are touching (grasping) the real thing, and error is out of the question. It is the observations of this ontic aspect of 'what is', including its cognitional sequel, that Aristotle's discussions of true ousia found in the central part of the *Metaphysics* (EZHΘ) will wind up with.

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<sup>3</sup> The investigation of the pair 'actual-potential' is all the more important as in the course of the previous observations (in H, chs. 2 and 6), the role of εἶδος as (the active cause of) actualization (ἐνέργεια) has come to the fore as fundamental for Aristotle's own metaphysical position against that held by Plato and others.

11.1 *On actuality and potentiality*

In chapter 6, actuality will be marked off from potentiality and first and foremost from motion. Thus we will discover the other sense, which has led Aristotle (chs. 1-5) to study the previous senses of δύνάμις, which are not pertinent to the present investigations.<sup>4</sup>

11.11 *Actuality and potentiality assessed*

Actuality or ‘being-in-complete-realization’ is explained as the counterpart of ‘being potentially’, and accordingly counter-instanced, so to speak:

*Met.* Θ 6, 1048a30-35: Actuality, then, is the presence of the thing (τὸ ὑπάρχειν τὸ πρῶγμα), not in the sense in which we call it ‘potential’. For instance, we speak of a potential Hermes in the block of wood, and of the half-line in the whole, because it may be taken from it; and we even call the man who is not studying a scholar, if he is capable of studying. Well, the thing that is in the opposite way, *that* is <what it is> in actuality (ἐνεργείᾳ).<sup>5</sup>

What all these examples have in common is their illustrating that something may be [x] in two ways or modalities, *either* by being it actually *or* by being it in incomplete reality, which boils down to possessing the capability of becoming it. Thus on the restriction of being [x] only potentially, Hermes *is really there* (ὑπάρχει) if the wood is present, as well as the half-line *is really there* if a line is given; likewise, the scholar *is really there* even if someone who is only capable of studying is present. From the semantic point of view, when you ask me for a statue of Hermes, I can truly say: “Well, here you are”, offering you a block of wood.

This passage (1048a35-b9) also contains an interesting remark on scientific method. Aristotle means to say: we sometimes go about discussing ‘be’ in actuality by way of induction (ἐπαγωγή). For it is not always necessary to define everything; you are sometimes entitled to confine yourself to grasping the analogous element in all the cases you have before you (τὸ ἀνάλογον συνορᾶν). For instance, when you can proceed by observing in the particular case at hand a certain analogon, e.g. as that which is actually building to that which is

<sup>4</sup> Kosman (1984), esp. 121-34.

<sup>5</sup> A lucid exegesis of the ‘actual vs. potential’ issue is found in Guthrie VI, 121-4. For a broader assessment of ἐνέργεια and related terms as used in the context of action and activity see Van Ophuijsen (1993), 752-5.

capable of building, and the waking to the sleeping; and as that which is actually seeing is to that which has its eyes shut but has sight; and as that which has been shaped out of matter to the matter. Now let actuality be defined, Aristotle continues, by one member of this antithesis, and the potential by the other. But you should notice that not all things are said to be in actuality in the same sense; the analogy only applies to the diverse ways in which each of them is to its potential state, seeing that the manner in which e.g. A is *in* B or *to* B, is on the same footing as that in which C is *in* D or *to* D. For some are so related as activity to power (ὥς κίνησις πρὸς δύναμιν), others as essence to some sort of matter (ὥς οὐσία πρὸς τινα ὕλην).<sup>6</sup>

Next, this variety is explained, and once more the semantic complementarity of the respective types of potentiality and actuality comes to the fore:

(a) 1048b9-17: The potential entities, infinity (τὸ ἄπειρον) and void (τὸ κενόν), and their likes have no actuality, properly speaking, since their potential state of being infinite and void etc. will never be properly actualized. Therefore the expression 'The void exists potentially' is an improper one, and 'The void will *be* actually' is false.<sup>7</sup> Notice that the counter-instance of the potentially seeing or walking is presented in semantic terms: things can *truly be said* without qualification either to potentially see and walk, or to be doing so in complete reality.

(b) 1048b18-35, where actuality is the counterpart of 'motion' in the sense of 'the doing (πράξις) leading to it'. An interesting opposition

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<sup>6</sup> 'As A is *in* B' answers to 'as form in matter', while 'as A is *to* D' answers to 'as activity to power' (Ross II, 251). Aristotle instancing the 'being-in' relationship with that between form and matter may remind us of his treatment of matter in *Met.* Z; see also Kosman (1984), 135ff. Ross has drawn our attention to the variations of language connected with the opposition and juxtaposition of κίνησις and δύναμις throughout Aristotle's work (*Met.* Θ 6, 1048b18-35; *Rhet.* III 11, 1412a9; *Phys.* III 2, 201b31, *An.* III 7, 431a6, *EN* VII 14, 1154b27; X 2, 1173b2; *Met.* K 9, 1065b14-1066a7, 1066a17-26), and rightly explained them as linguistic variations without doctrinal impact.

<sup>7</sup> Nor will there ever *be* an actual infinitude as something separate (b14-15, where the use of χωριστόν is noticeable). From the Aristotelian point of view, this is peculiar, because in Aristotle's view, any proper potentiality should at some time be actualized. This kind of improper potentiality is also of a remarkable nature because in the other cases it is *things* that are actually [x] and potentially [y], while in the case of infinity and void, their 'being-themselves', or 'existence' is in order. In the former cases, the potentiality of being is the potentiality possessed by, say, [x] of being [y], owing to which [x] may be named a δύναμει ὄν. See the pertinent discussion of potentiality and actuality in Guthrie VI, 119-29, esp. 120, and Kosman (1984).

is made between activities ('doings') which are in themselves complete actualizations, such as seeing, which *eo ipso* and from the outset includes the fact that the object is seen in full actuality, and, on the other hand, activities such as the removing of fat ('thinning', ἰσχναίνειν), which, qua tentative actions, do not include the reaching of their end (τέλος), viz. that e.g. the object is thinned in the sense of 'thin' (so that the action has immediately reached its end), though it may have become slightly thinner than before. Many actions are of the latter type, like the processes of learning, walking, building, which all, instead of being activities that reach their ends from the outset, take time and are just on their way to their ends, namely to have learnt and being learned now, to have reached a certain point by walking,<sup>8</sup> and to have finished building<sup>9</sup> and now be the builder of [x].<sup>10</sup> Of course, concerning learning, walking, and building too, there is an immediate transition from the potentiality consisting in the capabilities of learning etc. to the actualization of these capabilities.

11. 12 *When can what is actually [x] be named 'a potential [y]'?*

Considering the idea that actuality and potentiality are opposite states of things which are, or are not yet but may become, something else, the question comes up when some [x] is to be called 'a potential [y]'. For instance, can the element earth (or rather 'something earthen') be properly called 'a potential statue', or should this name be reserved for wood or stone (or rather 'something wooden' or 'something \*'stonen')? This is discussed in the first part of chapter 7 (1048b37-1049a24). The remainder of the chapter will deal with a cognate question concerning the naming not of the material [x] after its being potential [y], but, precisely the other way round, of [y] as having [x] as its matter.<sup>11</sup>

<sup>8</sup> For βαδίζειν = βαδίζειν πόθεν ποῖ ('to go from one place to another') see *EN* X 4, 1174a29-34.

<sup>9</sup> See *EN* X 4, 1174a19-21: "For every motion, e.g. that of building, takes time and is for the sake of an end, and is complete when it has accomplished what it is after".

<sup>10</sup> Note the grammatical function of the Greek perfectum, which, unlike the imperfect and the aorist, indicates the completion of an action in the past. E.g. διαβέβηκα τὸν ποταμόν = 'I am at the other side of the river', rather than 'I crossed the river'.

<sup>11</sup> Burnyeat's division (130ff.) of the chapter is less appropriate, it would seem.

As for the first question,<sup>12</sup> we should be aware from the outset that it is not so much about  $[x]$  having a capacity ( $\delta\acute{\upsilon}\nu\alpha\mu\iota\varsigma$ ) to be  $[y]$ , but about what it means to say that what is actually  $[x]$  may be given the name (appellation)<sup>13</sup> 'a potential  $[y]$ '. The first issue is merely an ontological one and, so to speak, a *de facto* question, the second is a semantic one and actually a *de jure* question. Thus in Aristotle's view, an element, like earth, surely possesses the capacity to become a man, but a piece of earth is not entitled, though, to be addressed as 'this potential man', since, in terms of generation, there is too much between 'earth' and 'man'.<sup>14</sup>

Before embarking upon the issue of naming and appellation as found in this chapter, it is useful to assess the discussions of this semantic topic in the totality of the metaphysical investigations carried out in the central books ZHΘ. In his search for the true ousia of the outside things (in Aristotle's words,  $\tau\acute{o}\ \acute{o}\nu$  or 'that which is'), Aristotle inquires into the various ways of expression in which we may call them up for examination. First, two improper ways of naming (appellation) have been discarded: to wit, in *Met.* E 2-3; the one in which they are brought up in their capacity of coincidental being ( $\tau\acute{o}\ \acute{o}\nu$   $\tau\acute{o}$   $\kappa\alpha\tau\acute{\alpha}$   $\sigma\upsilon\mu\beta\epsilon\beta\eta\kappa\acute{o}\varsigma$ ), and, in E 4, the way in which we use the phrase  $\tau\acute{o}\ \acute{o}\nu$  to refer to states of affairs in which the outside things are involved owing to our framing statements about  $\pi\rho\acute{\alpha}\gamma\mu\alpha\tau\alpha$ , i.e. the outside things, including their appurtenances; in other words, apophantic being ( $\tau\acute{o}\ \acute{o}\nu$   $\acute{\omega}\varsigma$   $\acute{\alpha}\lambda\eta\theta\acute{\epsilon}\varsigma$ ).

Once the road has been cleared for testing the credentials of the only veritable claimant, the test discloses (in Z-H) the fact that it is the enmattered form ( $\epsilon\acute{\iota}\delta\omicron\varsigma$ ) that is the true ousia, so that if by our naming things we zoom in on their *eidos* we *eo ipso* take hold of their true being, no matter whether it concerns the substantial or a non-substantial *eidos*.<sup>15</sup> Finally, book Θ carries out what remains to be done, viz. to scrutinize two alternative ways in which the various categorial modes of being may be expressed, i.e. using terms referring to

<sup>12</sup> For the second question see my section 11. 14.

<sup>13</sup> Notice the recurrent instances of the verb  $\acute{\lambda}\acute{\epsilon}\gamma\epsilon\iota\nu$ ; see section 11.15.

<sup>14</sup> At *An.* II 5, 417a21-b28 Aristotle distinguishes between two kinds of potentiality and actuality. E.g. a new-born child possesses knowledge in first potentiality, and when it has grown up it may actually acquire some special knowledge in first actuality; the latter state of knowledge includes the second potentiality of actually contemplating or applying the previous knowledge. See De Haas (2000), 166ff.; 177ff.

<sup>15</sup> For  $\epsilon\acute{\iota}\delta\omicron\varsigma$  as matching the  $\tau\acute{\iota}\ \acute{\epsilon}\sigma\tau\iota$  question also with items from non-substantial categories, see *Top.* I 9.



a thing's potential being, and those expressing its ontic truth or intelligibility.

Returning now to the discussions of  $\Theta$  7, it is pointed out in the first part of the first section (1049a1-18) that earth has first to become seed, and perhaps not even then — this reservation is made explicit some lines further on (a14-15: “for it must be deposited in something other than itself and undergo a change”)<sup>16</sup> — before you can call it a potential man. It is only when through its own motive principle something (like semen in the appropriate medium) has already acquired such and such attributes, that it is potentially some other thing (a man). Likewise, earth has to become bronze or wood by undergoing a change before we may call it a potential statue.

The remaining part of the first section (1049a18-24) has been characterized as “a linguistic test of the potential matter of a thing” (Ross, II, 256). Because of the semantic approach throughout the chapter it is better to say that this chapter sets out to develop the general semantic issue. This is also clear from the fact that the appellation ‘potential’ includes an open spot to be filled in by a variable  $[y]$ ,  $[z]$ , or, in Aristotle’s conception, ‘being potential’ is assigned to some  $[x]$  *with reference to* something else,  $[y]$  or  $[z]$ . This is why Aristotle tries to clarify his intention by offering a series of stages, say,  $[r]$ ,  $[s]$ ,  $[t]$  etc., found in a process of actualization, which precede the final product,  $[y]$  or  $[z]$ . In point of fact, the appellations may be assigned to the preceding things,  $[r]$ ,  $[s]$  etc. with reference to  $[y]$  or  $[z]$ .

Two devices determine the line of argument in a18-24. First you should observe the series of stages in any process of becoming, which goes from a thing’s, say  $[y]$ , initial matter to its being  $[y]$  in full actuality, and be aware, then, that  $[x]$  may be called a ‘potential  $[y]$ ’ if and only if it is  $[y]$ ’s proximate matter, i. e. it immediately precedes  $[y]$  in the series of intermediate stages. The other pivotal device is a lexical tool for picking out a thing  $[y]$ ’s proximate matter,  $[x]$ , the latter not taken in its capacity of being a definite thing (a ‘this’, ἐκεῖνο) itself in its own right, e.g. a piece of wood, but as that which it is made of (‘wooden’), i.e. its material quality (ἐκεῖνινον).<sup>17</sup>

<sup>16</sup> The (male) semen has first to be mixed up with the (female) catamenia; *GA* I 20, 729a32-33.

<sup>17</sup> It is along this line of thought that the ‘prime matter’ issue is to be addressed; Bemelmans (1995), 95-119; my sections 12.37-12.39.

Aristotle's general purpose seems reasonably clear. The difficulties arise when we attempt to give a detailed interpretation of the ἐκεῖνο-ἐκεῖνόν device. Clearly, it is meant to focus the attention on the material constitution of the objects (ἐκεῖνα) making up the series of successive stages involved in the process of change, by disregarding the fact that this material is diversified in the corresponding successive shapes. Thus taking the generative process of a statue as an example, the series made up by the physical objects  $[r]$ ,  $[s]$ ,  $[t]$ ,  $[v]$ ,  $[w]$ ,  $[x]$ ,  $[y]$  —  $[r]$  being a determinate clod of earth;  $[s]$ , some semen;  $[t]$ , a tree;  $[v]$ , a dead tree-stump;  $[w]$ , a petrified fossil;  $[x]$ , a block of stone; and  $[y]$ , the statue — should not be taken as consisting of *this* clod, *this* semen, *this* tree, *this* stump, *this* fossil, and *this* block, but as the initial material, earth, *qua* successively diversified and shaped into  $[r]$ ,  $[s]$ ,  $[t]$ ,  $[v]$ ,  $[w]$ , and  $[x]$ , as to eventually become the statue,  $[y]$ .

On this interpretation, Ross's (II, 256) and Burnyeat's (127-31) rendering of ἐκεῖνόν, 'x-en' is somewhat confusing, as is Bostock's '\*that-en', because the notation  $[x]$  as well as the demonstrative 'that' usually refer to an object ('piece of stuff', with the emphasis on 'piece' and 'this-ness'), rather than the kind of stuff they are made of taken as such. Putting it grammatically, Aristotle's ἐκεῖνο in this context serves (as it always does) as a pronoun replacing a count noun ('piece of wood' or 'log'), not, as Ross, Burnyeat and Bostock seem to take it, a mass noun ('wood'). But since it is precisely the stuff-aspect that is in the forefront of Aristotle's attention, he must reject the use of the word ἐκεῖνο, and recommend us to direct our attention to the material which ἐκεῖνο is made of, and use the word ἐκεῖνόν instead, since the stuff as such is not indicated by the count-(pro)noun ἐκεῖνο.

#### 11. 13 *On a similar use of the ἐκεῖνο-ἐκεῖνόν device in Met. Z 7*

Our interpretation is supported by Aristotle's earlier use of the neologism ἐκεῖνόν in Z 7, 1033a5ff. It is stated there that some things are not named using the name of the particular thing they come from (e.g. 'piece of wood'), but paronymously ("by a verbal change"; παράγεται 1033a17) 'wooden'. For instance, a statue is not called 'a stone' (λίθος), but 'of stone' (λίθινος, lit. '\*stonen'), so that it should not be addressed 'this (piece of) stone', but 'this \*stonen' (1033a5-7). Next (a5ff.), this is contrasted with processes of change, such as of a man who has become healthy after he has been sick. The

healthy man is not named after the name of the state from which he came to be healthy (i.e. 'being-sick'),<sup>18</sup> and so cannot be named 'the patient' any longer.

Theoretically, the difference between the two kinds of naming applied to the statue and to the healthy man might seem a bit strange, because in both instances there is a similar material identity between the 'thing from which' (the ἐξ οὗ) and the thing coming from it. The reason for the difference between the two cases is, Aristotle explains (a8-12), that although what the healthy man comes from is in fact the underlying thing (ὑποκείμενον) — which we call the matter — no less than the privation (referred to by the ἐκείνιν, 'being-sick' or 'sickness'): for it is not only the sick, but also the man in question (the ἐκείνο) who becomes healthy; none the less it is much more reasonable (μᾶλλον) to say that the healthy man arises from 'there-being-a-sick man', not from 'there-being-a-man', while the statue *can* truly be said to have arisen from 'there-being-a-stone'.<sup>19</sup> Subsequently, the seeming resemblance is cleared up by using the notion 'privation', being the underlying thing's previous state:

*Met. Z 7, 1033a13-19:* On the other hand, where the privation is nameless or obscure, as e.g. in bronze the absence of any definite shape<sup>20</sup> or in bricks and logs the absence of the arrangement to be a house, the <arising> thing appears to come *from* these materials in the same way as in the previous case the healthy came *from* the sick. This explains why, just as in the latter case, we do not call a thing by the name of that thing (ἐκείνο) from which it comes; the statue is not called 'the piece of wood' either, but, by a verbal change, 'a wooden thing', not 'bronze' but 'bronzon', not 'stone' but 'of stone' [\*'stonen'], and the house not 'bricks' but 'bricken'.<sup>21</sup>

Anticipating the exposition in Θ 7, this passage finishes with an aside<sup>22</sup> (1033a19-23) that on closer inspection, we should not even say without qualification that a statue 'is produced' from wood, because coming to be implies change in that from which a thing comes to be, and not permanence.

<sup>18</sup> Following the suggestion made by Frede and Patzig (*ad loc.*) to read ἐκείνιν at a8, instead of ἐκείνο, which enforces the intended contrast (Bostock, 129).

<sup>19</sup> Compare what I have called 'stratificational semantics'; see our *Index*, s.v.

<sup>20</sup> So that we may speak of the underlying bronze as a 'mass of bronze,' rather than 'something bronzon'.

<sup>21</sup> All of them are signified by the word ἐκείνιν. See 1033a6-7: οὐκ ἐκείνο, ἀλλ' ἐκείνιν.

<sup>22</sup> Introduced by ἐπεί; see my *Index*.

The crux of the interpretation of the passage under discussion is what precisely we should understand by the various terms significative of the stuff ('bronze', 'wood', 'stone'). They are commonly taken as 'mass nouns'. On the above interpretation, however, they are used by Aristotle in this context as count nouns. Bostock (128) is right in pointing out what on the face of it seems to be a serious difficulty. In Greek, (the masculine) λίθος is usually a count noun ('a stone'), while the neuter ξύλον primarily stands for 'piece of wood' or 'log' or 'stick', generally "wood cut and ready for use, firewood, timber etc." (Liddell & Scott), and easily takes, particularly in the plural, the secondary connotation of 'wooden material'.<sup>23</sup> The core of the problem is how to understand χαλκός ('copper', or alloyed with tin, 'bronze'). No doubt, it is primarily a mass noun, and its use to stand for anything made of metal (arms, armour, knife, axe, fish-hook, or bronze plate, bronze mirror etc.) is metaphorical, and so secondary. On the other hand, its use as a count name for concrete objects is widespread.<sup>24</sup>

However, we should not reduce the problem to an *either-or* question. Even if we take it for granted — with good reasons, for that matter<sup>25</sup> — that Aristotle frequently uses the word χαλκός as a mass noun to indicate a certain stuff, the salient point is that, even when speaking of materials, he usually talks about concrete objects or pieces of the material under discussion, under the aspect, that is, of their being 'made of' it. For instance, when he talks about the mixture of mixable materials in *GC I*, 10, Aristotle clearly has concrete pieces of stuff in mind. So his speaking of there hardly being a growth *in volume* when tin is combined with copper — as is generally the case when only one of the components is susceptible of mixture, or surpassingly susceptible, the other being susceptible in a very low degree — can only be understood if we take his words to concern concrete pieces of stuff.<sup>26</sup>

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<sup>23</sup> I cannot go the whole way with Bostock, who seems to put the two senses on a par.

<sup>24</sup> Liddell & Scott, *s.v.* II, 1-6. Bostock is certainly wrong in thinking that in Greek 'bronze' is always a mass noun.

<sup>25</sup> Bonitz, *Index*, 845a8-20.

<sup>26</sup> *GC I* 10, 328b1ff. At b20ff. Aristotle is talking of the *shape* of mixable objects ("anything is mixable which, being easily modified in shape, is capable of acting or being acted upon; [...] and mixture is the union of the mixable objects when they have undergone alteration"). Evidently, it is objects or pieces of stuff that are said to be capable of acting, not some stuff in general. Incidentally, our speaking of mixing stuff is on the same footing. Anyhow, Bostock may be right in doubting

Nor can the absence of the definite article before the stuff name be adduced in support of its being taken as a mass-name. It so happens that all the words that are not preceded by the definite article, such as λίθος at 1033a7 or ξύλον, χαλκός, and λίθος at 1033a17-19, are used predicatively;<sup>27</sup> this cannot come as a surprise, since the whole passage 1033a1-23 is devoted to how things are when their definitions are concerned (a1: τῶν ἐν τῷ λόγῳ). In addition, when there is talk of πλίνθοις and ξύλοις (at a 15), and πλίνθοι (at a 19-20), there can be no doubt that it is concrete objects (bricks and logs) that are being considered, not stuff as signified by mass names.<sup>28</sup>

Therefore it is better to assume that both in Z 7 and in Θ 7 as well, Aristotle is dealing with a linguistic test concerning the ontic status of a thing's material. The difference between the two passages is only that what is stated in general terms of material constitution in Z 7 is discussed in terms of matter's potentiality in Θ 7. The main issue is the same, however. In any process of change, the development goes from one material *object* to another, but objects are involved in change qua being some matter in a determinate shape, and, properly speaking, it is the material that undergoes change. Not the material as such, of course, but as it is so-and-so shaped. Thus just as in a process of recovering, the healthy man comes to be from there-being-a-sick-man, not just from sickness, likewise if a statue is shaped in a particular piece of wood, it is always the *shaped* wood that undergoes the change. Finally, when it comes to naming, things are somewhat different. This statue cannot reasonably be named 'this piece of wood', let alone 'this piece of earth', but \*'the wooden' <thing> will do. The healthy man, on the other hand, cannot be named after his previous state, 'this patient', nor\* 'sick-en', because the ἐξ οὗ formula is used in a different way here.

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(128) "whether Aristotle could even have understood the question 'Did you mean to contrast the stonē statue with a stone or with some stone?' For there is no Greek word that corresponds either to 'a' or to the unaccented 'some'".

<sup>27</sup> In Greek, words that are predicatively used are usually not preceded by a definite article.

<sup>28</sup> Likewise, in Θ 7, ἡ γῆ (at 1049a17, 20, 27) is not 'the earth', but 'the clod of earth', as ὁ ἀήρ and τὸ πῦρ (at a26) are 'the airy thing' and 'the fiery thing' (but τὸ πῦρ at a27 is the element, fire).

11. 14 *On naming something after its potential status*

In the remaining part of the first section (1049a18-24) the corresponding problems surrounding naming will be discussed. The kernel of the problem is whether if we focus on the potential aspect of things, our naming will be representative enough to get a hold on their true being. If so, discussions about a thing's potentiality can be admitted to the domain of metaphysics; if not, such discussions should be dismissed.

Aristotle starts by analysing what happens precisely when we are defining things along the lines of their material constitution and potentiality, and tries to establish what terms are to the point, then, and what are not. The passage at issue contains a reference back to the semantic distinction made in the opening lines of this chapter between materiality and potentiality, saying that only the potential thing,  $[x]$ , found immediately preceding the actualization of  $[y]$ , is entitled to have the name 'potential  $[y]$ ':

*Met.*  $\Theta$  7, 1049a18-24: It seems that <when we name things from the angle of their material constitution> what we are indicating ( $\lambda\acute{\epsilon}\gamma\omicron\mu\epsilon\nu$ ) is not <its material taken as> a particular thing, but that thing as being made of some definite material. For instance, the casket <is brought up> not as 'a piece of wood', but 'wooden thing'; and likewise the piece of wood not as 'a clod of earth', but 'an earthen thing'. And again earth will illustrate our point in so far as<sup>29</sup> it similarly is not just some other thing [viz. air], but made of it<sup>30</sup> ( $\acute{\epsilon}\kappa\epsilon\acute{\iota}\nu\omicron\nu$ ); as for this thing taken as that particular ( $\acute{\epsilon}\kappa\epsilon\acute{\iota}\nu\omicron$ ), always the last thing in the series is, without qualification ( $\acute{\alpha}\pi\lambda\acute{\omega}\varsigma$ ), that thing potentially.<sup>31</sup> For instance, a casket is not <to be brought up as> 'earthen thing' nor 'clod of earth', but as 'wooden thing'; for it is this that is potentially a casket, and *that* piece of matter is the casket's matter, that is to say, wooden thing in general of a casket in general, and the particular piece of wood of the particular casket.

It should be borne in mind that in this paragraph, as in the following ones, the common renderings of the examples given by Aristotle to illustrate what he has in mind all miss the point, I am afraid, if we supply  $\acute{\epsilon}\sigma\tau\iota$  and thus take them to be sentences instead of assertibles; in fact, by supplying  $\acute{\epsilon}\sigma\tau\iota$ , one makes Aristotle say e.g. that the casket *is* not a piece of wood, and that wood *is* not earth. Of course, they

<sup>29</sup> Reading its primary position in the series, instead of  $\epsilon\acute{\iota}$  at 1049a20.

<sup>30</sup> I.e. 'airy'.

<sup>31</sup> E.g. in the series 'fire-air-earth-wood-casket' (to be read as 'fiery thing-airy thing-earthen thing-wooden thing-casket'), only the last one can reasonably be called 'a potential casket'.

really *are* wood and earth, in a way; if not, the chain of generation would not exist at all. But what is at issue is the correct way of assigning names, not ontic situations as expressed by statements. For this reason, one should be aware that the λέγομεν of a18 — which is taken up at 25ff. — covers the entire paragraph, and so one should render these and the other examples in terms of naming.

### 11. 15 *On naming something after its material constitution*

So much for the thing, [x] which in the series going from potential to actual immediately precedes the concluding stage, [y], and therefore is (most) entitled to the name, ‘potential [y]’. Of course, the fact that the name ‘potential [y]’ is reserved for [x] in its capacity of being [y]’s material in the stage immediately preceding the actualization of [y] does not prevent the entities of the foregoing stages from each being called [y]’s matter. In the second section of this chapter (1049a24-b2), then, a thing’s material constitution, not potentiality in the strict sense, will be under examination.

First some preliminary remarks are made about the above series, [x] to [y], viewed, this time, as going (backwards) from the actual thing, [y], to the matter at the head of the series. So there is no longer talk about potentiality — at least in the strict sense of the previous paragraph —, but about matter, i.e. the actual thing, [y]’s material constitution in general. It is the status of the initial member of the series in particular to which attention is now drawn.

This is where the famous label πρώτη ὕλη comes in. If there is something at the head of the series, Aristotle says (1049a24-27), which, with reference to something else preceding it in the generative process, is no longer called ‘made of’ (ἐκείνινον), then *that* acts as ‘primary matter’. For instance, taking the series ‘fire–air–earth’, the clod of earth may be brought up under the name ‘airy thing’, and the parcel of air as ‘fiery thing’, but fire itself, being the element at the head of the generative process, should be named primary matter after its primary position in the series.

That this element is regarded as ‘primary matter’ is explained by adding the phrase ὡς τόδε τι οὐσα.<sup>32</sup> These words should be taken to

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<sup>32</sup> Reading at 1049a27 ὡς (instead of οὐ) with the codex Parisinus, which seems to have been omitted by ps.-Alexander, and so presumably by Alexander himself, as well as by the codex used by William of Moerbeke, while the Laurentianus reads εἰ δὲ (instead of ἢ δὲ = ‘of course, in its capacity of being a *this*?). By taking the

mean (in this presentation of the generative process, that is)<sup>33</sup> that fire is a stuff which is identifiable as by itself something definite.<sup>34</sup> That is to say, in the way this series is established to elucidate the origin of the final product, [y], the first member (πρώτη) of the series — which, when starting from [y], is at the same time the ultimate member (ἔσχατη) — viz. fire, is referred to as being itself some definite element. Again, it is the manner in which things are brought up, not primarily the way they *are*, that is spoken of. In other words, the ultimate or most remote member of the series analysing [y] into its material constituents is taken most pregnantly as the ἐξ οὗ of [y] (and the intermediate stages), and not in its own right.

This focussing on the mere materiality of the first member of the series includes the general contrast to be made between *viewing* some underlying thing (ὑποκείμενον) as being a definite thing in its own right, on the one hand — not excluding, for that matter, the fact that it is *also* the material of something else (viz. everything following it in the series) — and taking it merely in its capacity of being the primary stuff of [y] and the intermediate things, on the other. The subsequent lines are going to elaborate this semantic contrast.<sup>35</sup>

It is important to see in the first place that, unlike the previous paragraph, the present discussion does not bear on the correctness of

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opposition to be between 'primary stuff' and 'thing made of it', the editors commonly follow the codex Vindobonensis, which reads the negative particle οὐ, and accordingly explain these words ("not being an individual thing") as meaning that fire qua primary stuff is not a 'this'. But the opposition is actually between the different positions of the primary stuff and the other materials [y] is said to be made of. I think the confusion has been caused by the fact that the adherents of the οὐ reading fail to see that what is called 'first' (πρώτον) at a24-27 is called 'ultimate' (ἔσχατον) at a34-36, depending on its respective position in the ascending or descending series.

<sup>33</sup> If the series is established from the angle of another element, that other element is adduced as the primary stuff under the name πρώτη ὕλη. E.g. at *Met.* Δ 4, 1015a7-10, water is the 'primary element'. At *GA* I 20, 729a32-33, the catamenia are spoken of as material "having in their nature an affinity to the primary matter" (κατὰ γὰρ τὴν πρώτην ὕλην).

<sup>34</sup> Burnyeat II, 131f. Needless to say that even the adherents of the thesis that Aristotle recognizes such a mysterious thing as 'prime or primordial matter' (or totally neutral stuff, devoid of any form, being pure potentiality, serving for an eternal and completely indeterminate substratum to all physical change) do not assume that Aristotle is talking about this mysterious entity in this context. For a discussion of the myth which takes the notion 'primordial matter' to be genuinely Aristotelian see Charlton (1970) and Bemelmans (1995), *passim*; my sections 12.37-12.39.

<sup>35</sup> Burnyeat's talk (II, 132) of a general contrast between "subjects which are τὸδε τι and subject as matter" is somewhat confusing because of its ontological overtone.



naming the things making up the preceding stages [*r*] to [*x*], with reference to [*y*], ‘a potential [*y*]’. What is now being investigated is in what way [*y*] is named after an attribute referring to its primary material. What is examined in particular is precisely what is referred to when we assign to [*y*] an attribute bearing on its material constitution. For instance, if [*y*] is named ‘wooden thing’, ‘earthen thing’, ‘fiery thing’ or ‘airy thing’, is, then, its material referred to as something that is also a definite element by itself, or merely as incorporated in [*y*]? To this end the ontic status of the point of reference has been diversified into ‘primary matter’ and the materials found in the later stages of the generative series:

*Met.* Θ 7, 1049a24-27: If there is something as first entity, which is no longer, with reference to something else (κατ’ ἄλλο) ‘made of *that* something’ (ἐκείνινον), then this is the primary stuff <of the series>. For instance, if the <element> earth <is brought up as> ‘airy’, and air, not as ‘fire’ but ‘firy’, then fire is the primary stuff, while being something definite [viz. an element in its own right].

This is further explained by pointing out the twofold acceptance of the notion of ὑποκείμενον. One has to realize at the outset that Aristotle is still discussing the various ways in which we may *call up*<sup>36</sup> things of the outside world. Thus when in the next sentence he differentiates the hypokeimenon by being a ‘this’ or not being a ‘this’, Aristotle does not mean to say that there are two kinds of hypokeimenon, one a particular thing and the other not. What he means is that hypokeimena, which, of course, *are* all particular things, may be brought up in a twofold way, either by calling them by the name of that thing or by giving them an appellation deriving from that name. For instance, you may call — in principle, at least — a statue either ‘earth’ (‘clod of earth’) or ‘earthen’ (ἐκείνινον). This issue of material constitution is elucidated by comparing it with instances of, say, qualitative constitution. The point of comparison, then, is that both in material and qualitative constitution the thing under discussion is submitted to a certain modification arising from its indwelling material or a property inhering in it, respectively.

Aristotle’s intention, then, is to show that the above ἐκείνινον manner of appellation as discussed in the foregoing paragraphs finds its parallel in cases of qualitative modifications (1049a27-34). Take for example, he argues, the particular things, educated man and pale

<sup>36</sup> Note the use of λέγεσθαι (at 1049a30; b1; b2) and κατηγορούμενον (a35).

man, in which the underlying things, man, body, soul, may be distinguished from the properties (or attributes) 'educatedness' and 'paleness'. Now the underlying thing cannot be brought up by using the substantives 'educatedness' or 'paleness', but merely, using the adjectival derivatives,<sup>37</sup> as \*'the educated' or \*'the pale', just as the statue is brought up as 'made of [*x*]' (ἐκείνινον, not ἐκείνο):

*Ibid.* 7, 1049a27-34: <In our bringing up things> that of which something is said of, viz. the underlying thing,<sup>38</sup> is differentiated by being a 'this' or not being a 'this'. For instance, the underlying thing for properties (πάθεισι)<sup>39</sup> is man, body, soul, while educated and pale are the properties. Now the substrate, when educatedness has come to be present in it, is called, not 'educatedness', but \*'an educated', as also man is not called 'paleness', but \*'a pale'; nor is he called 'ambulation' or 'motion', but \*'a walking' or \*'a moving', all akin to the previous expression 'that-en' ('made of that'). Wherever this is so, the ultimate thing <in the ascending analytical series> is <brought up as> a subsistent thing (οὐσία) <modified by the material or a property, respectively>.

Thus statues are brought up as, in the final analysis, 'earthen clods', not 'earth', in the same manner as men are called 'the pale' or 'the walking', not 'palenesses' or 'ambulations'.

Subsequently, Aristotle brings up the peculiar character of the cases in which the material analysis carried out in the ascending reductive series ends in a material element that is brought up as something being there in virtue of itself ('fire', 'earth' etc.). This feature is disclosed by showing that in these cases the above analogy is entirely out of the question. There is no talk now of appellations assigned to something in virtue of which it may be brought up as ἐκείνινον, something modified, that is, by a material or a property.

<sup>37</sup> Aristotle often says, as here, that we describe things παρωνύμως by words derived from the names of qualities; see *Cat.* 1, 1a12; 7, 6b13; 8, 10a28; *Top.* II 4, 111a33-b4. Instead of meaning grammatical derivation, Aristotle actually means to say that when naming a man 'pale' or 'cultured', we use a secondary appellation derived from the primary ones, 'paleness' and 'educatedness'. Along this semantic line of thought, 'paleness' is simpler than, and prior to, 'pale', which implies the complex notion 'being-affected-by-paleness'. Ross II, 257.

<sup>38</sup> Τὸ καθ' οὗ καὶ τὸ ὑποκείμενον. In this hendiadys the thing is indicated first logically, then ontologically. For the exclusive use of ὑποκείμενον to indicate a thing ontologically, i.e. 'underlying thing' or 'substrate', not 'logical subject', see my section 2.18.

<sup>39</sup> In the Greek text, the attributes assigned to a thing are indicated by the ontological term πάθος ('property'), being the counterpart of ὑποκείμενον, while in the modern languages 'attribute' is (felicitously) ambivalent. In Greek, the logical attribute is indicated by κατηγορούμενον (1049a35).

Quite to the contrary, the modifying material element, in spite of its inherence in the thing it constitutes, is now taken as something on its own, and the thing under discussion is straightforwardly designated by the name of the material itself, not ἐκείνινον, but ἐκείνο (not ‘earthen’, but ‘earth’). Evidently, the above parallel is missing now, since on no account can a man be brought up as ‘an educatedness’ or ‘an ambulation’.

In the cases in which the terminus of the analysis is not taken in its capacity of the thing’s material constituent, but as a specific ‘this’ of its own (εἶδος τι καὶ τόδε τι),<sup>40</sup> this terminus is matter, i.e. material substance (1049a34-37).<sup>41</sup> Along this line, then, you may bring up a wooden statue as ‘this (clod of) earth’.

Next a short remark is made about the twofold case of ἐκείνινον: their being put on a par is justified, and, by the same token, the peculiar nature of the opposite ἐκείνο case is clarified:

*Ibid.* 7, 1049a37-b2: It is quite proper that the ἐκείνινον device should apply both with reference to the material and the qualitative constituents, since these appellations are both indefinite (ἄοριστα).

It is stated, first, that appellations such as ‘the earthen’ or ‘the pale’ are ‘indefinite’. In fact, they do not offer distinctive information about the things they are said of, nor do they grasp these things in what they specifically *are*, since various kinds of things may be made of the same specific material or modified by the same properties. On the other hand, in the analysis of a thing’s material constitution and so arriving at its ‘primary material element’ — in fact, one of the four elements, fire, air, earth, water — one can also take this element as something in its own right and, accordingly, describe the thing which has a certain material constitution as ‘(an instance of) this element’, as a ‘that’ (ἐκείνο), that is, and not just as a ‘that-en’ (ἐκείνινον). Whereas the ἐκείνινον device only presents us with a coincidental, indefinite appellation, the ἐκείνο device captures something appropriately, to such an extent indeed that it may serve to properly represent its nature. For instance, by calling something ‘an earthen, fiery, or wooden <thing>’, you fail, owing to the indefiniteness of the neuter substantivatum (the makeweight, ‘thing’ in English), to offer

<sup>40</sup> For the juxtaposition of the notions εἶδος and τόδε τι cf. *Met.* Δ 8, 1017b25.

<sup>41</sup> At *Met.* Δ 8, 1017b24, the ultimate substratum is called οὐσία, because it precedes the reductive series of attributes assignable to something, and is not itself an attribute.

relevant information about it, while by bringing it up as 'earth', 'fire'<sup>3</sup> etc., it is identified as a 'this' in its own right.

You may say, This is just a matter of appraisal, because in both cases the specific nature of the concrete particular remains in the dark. However, this objection misses the point, since it is precisely this or that coincidental feature that is essential with respect to a certain investigation. When bringing up something as 'this or that element', one is focussing on something about the thing that one thinks to be of importance with respect to a certain discussion. For instance, when intending to demonstrate that a certain object (in fact, a statue made of ice) is easy to destroy, you have to call it up as 'this water', not as 'this thing made of ice', let alone 'this statue of Pericles', since for the special purpose of your demonstration your focussing on the element, water, is decisive, and as far as your argument is concerned, the (supposedly) vague appellation 'instance of water' presents us with more relevant information than the appellations 'ice', 'statue', 'of Pericles'.<sup>42</sup>

This brings us to another worthwhile point of attention. Like the previous ones, this discussion should be assessed in the framework of Aristotle's metaphysical investigations. The leading question throughout book  $\Theta$  is 'Can something be indicated properly by a name bearing on what it potentially is, or, the other way round, a name indicating its material (matter)?' The second part of this question is under examination in the present chapter. Aristotle states that only elementary matter, viz. fire, air, earth, water, which can all be taken in their capacity of being some 'this', meets the semantic conditions for this purpose, precisely because of its being a definite 'this'.<sup>43</sup>

#### 11. 16 *The actual thing's priority over its potential counterpart*

Clearly, the priority of actuality over potentiality has some bearing upon the representative power of naming on the basis of any kind of potentiality found in things; and this goes either way, both calling [ $x$ ] a potential [ $y$ ], and [ $y$ ] an actual[ $x$ ]. So the discussion of chapter 8 does not come unexpected. The general idea is that actuality is prior to potentiality.<sup>44</sup>

<sup>42</sup> For this use of the *qua*-procedure see my sections 2.6-2.7.

<sup>43</sup> Ross's comment (II, 257f.) on 1049b1 seems to miss the point in that he fails to recognize that the opposition between the  $\epsilon\kappa\epsilon\iota\nu\omicron$  and  $\epsilon\kappa\epsilon\iota\nu\iota\nu\omicron$  devices is relative to (our bringing up of) a thing's matter.

<sup>44</sup> Burnyeat (II, 133ff.) contains two interesting notes, one by Owen on priority

First a broad definition of δύναμις ('potentiality' or 'power') is given (1049b5-8), which is necessary in order to arrive at a full description of its counterpart, ἐνέργεια. The term δύναμις is used to stand not only for any principle of change in another thing or in the thing itself regarded as another, but in general any principle of motion or of rest. On this account, by δύναμις the dynamic power of things is understood, including the one that causes their own natural development, so that Aristotle's subsequent remark about nature cannot come as a surprise. In keeping with the Lexicon (Δ 4, 1014b17), where nature is defined as "the immanent part of a growing thing out of which its growth first proceeds", nature is now said to be "in the same genus as potentiality, since it is a principle of motion, although not in some other thing, but in the thing itself qua itself". The last clause serves to emphasize that the development of something does not entail that it changes into something else, but should be understood in terms of its own natural development out of its proper immanent *eidōs*.

Taking δύναμις in this broad sense, its being second to actuality is evident. Actuality, then, is said to be prior to potentiality both in definition and beingness (λόγῳ καὶ τῇ οὐσίᾳ); in time it is prior in one sense, and in another not (1049b10-12). This is explained in the next few lines, in which it will appear in the first place that Aristotle is speaking of things which are potentially something else, and their actualizations, rather than potentialities and actualities *in abstracto*.

The definitorial priority under discussion clearly comes to the fore from the fact that anything that is potentially something else should, qua being potential, be defined in terms of its actualization. For instance, that which is potentially constructive (οἰκοδομικόν) — is qua being potential<sup>45</sup> defined in terms of 'construing' and 'building' (οἰκοδομεῖν), as what is visible (ὁρατόν) can only be essentially defined using the notion 'be seen' (ὁρᾶσθαι). What applies to properly defining applies to knowledge (γνώσις), so that to define and know a thing in actuality must logically precede defining and knowing its status according to its corresponding potentiality (1049b10-17).

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in Θ 8 compared to *Met.* Δ 11 and Z 1, 1028a31-b2; the other by R. Heinaman analyzing what is said in *An.* II 5, 417a30-b16 about potential and actual sensation.

<sup>45</sup> Aristotle is speaking of τὸ πρῶτως δυνατόν, i.e. the thing, say egg, in so far as it is primarily addressed in its capacity of being potentially something else, viz. not as 'egg', but as 'potential bird', or the dog not as dog, but as 'visible thing'.

The temporal priority of the actual to the potential is discussed in 1049b17-1050a3. However, this priority is not unconditional. One has to distinguish between specific and numerical identity. The concrete particular thing, e.g. the seed, which is potentially some other particular thing, corn, is specifically posterior to the intended actual thing, though it is prior to it in terms of numerical identity. However, as far as numerical identity is concerned, the potential entity is itself posterior to the actual thing that has generated it, so that its priority over its intended actual thing is counterbalanced not only by its posteriority to the actual in terms of specific sameness, but also by its posteriority to its own actual cause in terms of numerical identity. This even goes for learning, i.e. the generation of artistic skill, since, in spite of your rejection of the well-known sophists' quibble that an apprentice who is not familiar with a certain skill will none the less be exercising it, you have to recognize that that which is coming to be, must have already come to be — the person who is learning an art must already partially have it. So Aristotle can conclude that, all things considered, the actual thing is prior to its potential counterpart in respect of generation and time (1049b18-1050a1).

The remainder of the chapter is devoted to what in the context of metaphysics is the main kind of the actual's priority over the potential, viz. priority in being-ness (οὐσία).<sup>46</sup> This ontic priority is elucidated in a twofold way: (a) in terms of generative potentialities and generation, or actualization of other powers and faculties (1050a4-b6); and (b) in the deeper sense of the priority that eternal things have over perishable things (1050b6-1051a2). Both discussions contain some digressions on cognate subjects.

The first kind of priority bears on the fact that in any generative process the actual (generated) things, although they are posterior in generation, are prior "in form and being-ness (τῷ εἶδει καὶ τῇ οὐσίᾳ)". This is explained by stressing the pivotal role of a thing's immanent ontic principle, the *eidos*, which has been identified in Z-H as its true *ousia*. The hendiadys τὸ εἶδος καὶ ἡ οὐσία once again refers to the form-communicating-beingness, i.e. the diverse modes of categorial being. This idea is elaborated, this time, in terms of teleology. In any process of generation, actualization or development, it is the *eidos* acting as the end and the perfection (τέλος). Actualization is in fact nothing but a (further) realization of the *eidos*

<sup>46</sup> Kosman (1984, 145-7) aptly takes ἐνέργεια in terms of being-qua-being.

counterbalancing matter, and it is for the sake of that realization that a thing's *eidos* includes a number of potentialities. Now potentialities and potentiality do not mean anything except in light of their actualities, and not the other way round, for "animals do not see in order that they may have sight, but they have sight that they may see", Aristotle explains (1050a10-11).

Further, matter's being is being in a potential state which has its bearings on the form, "just because, in the normal course of events, matter attains to the (intended) form" (1050a15).<sup>47</sup> Thus its being in actuality comes down to being in the form corresponding to its potentiality (τότε ἐν τῷ εἶδει ἐστίν), there being a definite form which ὕλη is programmed to acquire.<sup>48</sup> Activity is the end, and the actualization is nothing but the programmed activity. Hence the term 'actuality' (ἐνέργεια) is derived from 'activity' (ἔργον), and points to the complete reality of the thing under examination (ἐντελέχεια). Regardless of whether the exercise is itself the ultimate end (e.g. in the activity of seeing), or there is a separate result (e.g. in house-building), the actualization always bears on the end, to a higher extent at least than potentiality does (1050a23-29).

The conclusion following from the whole section 1050a4-b2 runs parallel to the outcome of Z-H, that a thing's οὐσία as found and identified in its dynamic εἶδος (ἡ οὐσία καὶ τὸ εἶδος) is its actualization (ἐνέργεια), and that along this line of argument (κατὰ τε δὴ τοῦτον τὸν λόγον) a thing's being in actuality is prior to its being in potentiality (1050b3-4).

Next, the ontological priority of actuality in a still stricter sense is discussed (1050b6-1051a2). *Sub specie aeternitatis*, it is actuality that is in question, and definitely not potentiality. And given that eternal things are prior to perishable ones, and no eternal thing exists potentially, since any potentiality includes the possibility of the opposite state of affairs (τῆς ἀντιφάσεως),<sup>49</sup> you have another, more fundamental argument in support of actuality's priority over potentiality. This argument also holds good for the elements that are involved in change, to wit, the earth and fire constitutive of the heavenly bodies, which are ever active and have their motion by themselves and in

<sup>47</sup> Burnyeat (II, 142) aptly refers for this use of the optative ἔλθοι ἂν ("would normally come, except in odd cases") to the treatment of τύχη and αὐτόματον in *Phys.* II, 5-6 (5, 196b22; 197a35; 6, 197b32; 198a6).

<sup>48</sup> Burnyeat, *ibid.*

<sup>49</sup> Same sense of ἀντίφασις at 1050b25 and 34.

themselves. In fact, they have the appearance of imperishable things (μιμεῖται τὰ ἄφθαρτα).

The chapter concludes (1050b34-1051a3) by applying the principle of the preceding argument to the doctrine of the Platonic Forms. It is objected to the adherents of this doctrine that 'Knowledge Itself' is, properly speaking, a thing in a potential state, not something actual, so that there must be something much more epistemonical (πολὺ μᾶλλον ἐπιστημον) — the corresponding particular activity, that is — than this Transcendent Form.

### 11. 17 *Some additional remarks about potentiality and actuality*

Chapter 9 contains first (1051a4-21) some remarks on actuality and potentiality in terms of good and bad, and next (a21-33) the actualization of potential geometrical constructions disclosing geometrical propositions (διαγράμματα) is examined.

A good actuality is said to be better and 'more worth having' than the corresponding good potentiality, because what is potentially [*x*] is more liable to being (becoming) [not-*x*] than what is actually [*x*]. Everything we may bring up as 'capable of being [*x*]' is likewise capable of being the contrary of [*x*]. For instance, the same thing we call 'capable of being healthy' is likewise capable of being ill — meaning, I take it, that our naming something 'capable of being healthy' logically equals naming it 'capable of being ill'.

The argument also holds the other way round. Also in the case of evils the end or actuality must be worse than the potential state, because the latter includes the capability of working out well.<sup>50</sup> Another instance is the capability of (the materials of) a house to either actually become a house, or, during the process of hous-building, to collapse.<sup>51</sup> We should refrain, however, from attributing in the case of evil things some priority — in the sense of "better and more worth

<sup>50</sup> On this assumption, both names are logical equivalents of the name 'animal'.

<sup>51</sup> For the peculiarity of the house-building example see the note by Owen in Burnyeat (II, 146-9), 146. The intended twofold potentiality must concern the materials, not the house; otherwise the opposition would oddly be between the ἐναντία 'potential house' and 'actual house'. An alternative interpretation could be given from the idea that the house-builder's capability of construing houses implies his skill of properly demolishing them. For the favourite idea that he who is an expert of doing well *eo ipso* possesses the skill for the worse, i.e. of eminently doing the opposite, see Plato's Socratic dialogues.



having" (1051a4) — to potentialities over actualities, since it is the evil actual *thing* that is by nature posterior to potentiality, not the intended actualization as such, the bad thing being just a deviation from what is normally programmed. In actuality as such there is no trace of evil or error. That is why in the things that are from the beginning, i.e. in eternal things, there is nothing bad, nothing defective, nothing perverted; for perversion is something bad.<sup>52</sup>

As for geometrical constructions, which are intended to disclose and prove geometrical propositions (1051a21ff.), in their case, too, it is by a sort of actualization (by the process of 'dividing', that is) that they are accomplished. After having offered some instances of proving geometrical theses by means of certain constructions, Aristotle infers that evidently, what is potentially the case (τὰ δυνάμει ὄντα) is disclosed by being brought to actuality. What is disclosed (εὐρίσκεται), properly speaking, is not the construction, but a certain geometrical proposition, or rather its being epistemically true, whereas the process of actualization concerns the potential construction serving for the epistemic proof of the thesis involved. Aristotle evidently plays on the ambivalence of the word διάγραμμα, which may be used to stand indiscriminately for both the geometrical figure or construction and the geometrical thesis or proposition disclosed by it.<sup>53</sup>

### 11. 2 *True and false as ontic properties*

In Θ, chs. 6-9, a special feature of the primary or categorial sense of 'be' has been dealt with, namely the ten categorial modes of being taken with reference to actuality and potentiality. In the final chapter of book Θ, Aristotle proceeds to discuss categorial being under yet another aspect, viz. that of truth and falsehood.

The opening paragraph (1051a34-b6) has throughout the years raised many puzzles.<sup>54</sup> They may be reduced to three main problems: (a) what is the place of chapter 10 in the whole of book Θ? (b) how is 'be' qua true related to 'be' as said with reference to the ten

<sup>52</sup> This paragraph is commonly assumed to be directed against Plato, *Rep.* II, 402 C; V, 476 A, *Theaet.* 176E, and *Laws* X, 896E; 898C.

<sup>53</sup> *EN* III 3, 1112b22. Cf. Asclepius CAG VI-2, p.174<sup>9</sup> and *Schol.*, 89b11: διαγράμματα καλοῦσιν οἱ γεωμέτραι αὐτὰ τὰ θεωρήματα. Bonitz, *Index*, 178a6-7.

<sup>54</sup> Ross II, 274; Reale II, 95f.; Burnyeat II, 164-6.

categories dealt with in Z-H? and (c) how is the exposition in  $\Theta$  10 connected with what has been said about truth and falsehood in E 4?

Let us first discuss these questions — which will turn out to be most closely interrelated — in some more detail. They all have bearing on the proper subject of  $\Theta$  10.

### 11. 21 *The proper subject of $\Theta$ 10*

Ross (II, 274) is of the opinion that this chapter has little to do with the remainder of book  $\Theta$ , which treats of potentiality and actuality, and mentions that others (A. Schwegler and W. Christ) regarded it as the work of an editor. Werner Jaeger thought that the chapter is by Aristotle, but was inserted here simply because some room was left at the end of the roll on which Z 1- $\Theta$  9 was written.

Burnyeat (164f.) feels that to link  $\Theta$  10 as a whole to the theme of potentiality and actuality found in  $\Theta$  1-9 is implausible, involving picking out particular passages and phrases in support of such an attempt. He would rather assess  $\Theta$  as a whole in the broader framework of EZH, in which the four uses of 'be' (the accidental, the categories, truth and falsity, potentiality and actuality) have been dealt with, in which E 4 introduces 'be' as truth and falsehood, with a reference (at1027b27: τὰ ἀπλὰ καὶ τὰ τί ἐστίν) forward to the discussion of 'simples' and the 'what-things-are' in  $\Theta$  10. His conclusion "that the whole of EZH $\Theta$  form a systematically arranged discussion of the senses of being — at whatever stage in their development the arrangement took place", however acceptable in itself, is not conducive enough to clarify the position of  $\Theta$  10.

Bonitz had been most explicit on this score, by pointing out (*ad loc.*) that in view of the enumeration of the senses of 'be' in  $\Delta$  7 it is only natural that after discussing the chief category, substance, and the distinction made between potentiality and actuality, Aristotle should go on to discuss truth and falsehood. He regards  $\Theta$  10 in particular as not out of place here, because  $\Theta$  8 has introduced us to the simple and eternal ousiai, i.e. ἐνέργειαι ἄνευ δυνάμεως, and these will now be described (1051b27ff.) as the objects with which one kind of truth is concerned.

All things considered, Ross hesitates between Jaeger's view and that of Bonitz, but there is no doubt in his mind as to Aristotle's authorship, since at E 4, 1027b28, the author had himself announced to us that we would find such a discussion in the *Metaphysics*.

Our second main question (about the relationship between ‘be’ qua true and the ten categorial modes of being) chiefly hinges on what to do with the words κυριώτατα ὄν at 1051b1. Unfortunately, the manuscripts’ evidence is a bit irresolute on this point.<sup>55</sup> Ross, followed by others (Tricot, Reale, *ad loc.*), takes exception to these words (when, as would be most obvious, they are taken with ὄν), because they seem to flatly contradict the earlier claim (at E 4, 1027b31) that ‘be’ qua true “is a different thing-that-is from those which are in the full sense” (ἕτερον ὄν τῶν κυρίως). For that reason, Ross thinks these words are probably a gloss, or should go after μὲν at 1051a34. Anyway, if retained, he suggests, the phrase must go with ἀληθές ἢ ψεῦδος, meaning ‘that which is true or false in the most proper sense of those terms’, which should be taken, he thinks, in contrast to truth and falsehood concerning the ‘simples’ dealt with later on (1051b17-1052a4). In his edition Ross has deleted the words, and in the *Oxford Translation* they are ignored. Jaeger made an attempt to solve the problem by postulating, and filling up, a lacuna, reading κυριώτατα ὄν <ἢ οὐσία, λείπεται δὲ ἐπισκοπεῖν τὸ ὄν> ἀληθές κτλ.<sup>56</sup> Unlike Ross’s interference in the text, Jaeger’s proposal was not adopted by the editors.<sup>57</sup>

The third main problem, viz. what the link could be between chapter 10 and chs. 1-9, has much to do with the previous ones. To my mind, the three problems are closely interrelated and their solution depends entirely on the correct interpretation of the phrase τὸ δὲ κυριώτατα ὄν.

Let us start with the grammatical construction of the lines 1051b34-1052a6. These lines form one sentence, which, introduced by ἐπεὶ (‘since’), consists, as so often in Aristotle, of a long prodisis to recapitulate the upshot of foregoing discussions, the apodosis beginning at a5 in the shape of a question which arises in light of what has been said in the recapitulation. As usual, modern renderings are liable to split up the Greek construction. Doing so, the scheme of

<sup>55</sup> The Laurentianus reads κυριώτατα ὄν, as do the Greek commentators. The Parisinus has κυριώτατον εἰ, while the Vindobonensis reads κυριώτατα ἦ and the *translatio Moerbekiana* has “maxime proprie aut”, which may support the readings of the Vindobonensis or the Parisinus. All in all, the manuscripts’ evidence against the usual reading κυριώτατα ὄν is not very impressive, and does not seem to substantiate Ross’s observation that there is a good deal of divergence among the manuscripts at this point.

<sup>56</sup> Reale, *ad loc.*

<sup>57</sup> Burnyeat II, 156. For my view see pp. 329-32.

Aristotle's initial exposition will be something like this: 'Be' and 'not be' are used in three senses: (1) with reference to the categories, (2) with reference to the categories taken in accordance with their potentiality or actuality, and (3) qua true and false being, taken this time (unlike E 4) also — just as we have done in the case of actuality and potentiality — in the primary sense, that of categorial 'be, that is. Now, to speak of truth and falsehood in the case of πράγματα has turned out (in E 4) to depend on things being combined and divided. So what we have to ask now is: *When* is there question of truth and falsehood in the aforesaid sense, i.e. true and false taken with reference to the categorial modes of 'be'?

On this interpretation, the above scholarly questions (a)-(c) (in section 11. 2) vanish, seeing that, just as in  $\Theta$ , chs. 1-9, the categorial modes of being, which in Z-H have turned out to be representative of the sense of 'be' that should be at the focus of the metaphysician's interest, have been studied in terms of potentiality and actuality. Likewise  $\Theta 10$  will discuss them under the aspect of truth and falsehood, after they have been discussed in E 4 in the sense of statemental truth and falsehood. On this surmise, there is no reason at all to harbour suspicions about the phrase κυριώτατα ὄν. Quite to the contrary, these words are indispensable to make clear that, unlike E 4, truth and falsehood will now come under examination qua features of 'be' in the primary sense (τὸ δὲ κυριώτατα ὄν ἀληθὲς ἢ ψεῦδος), the discussion of which was postponed *and* announced in E 4. Our understanding of the text also offers a better rendering of the words τὸ ἀληθὲς λεγόμενον ἢ ψεῦδος at a5-6, which are commonly taken to rather pointlessly stand for 'what we call truth and falsehood', instead of 'the above-mentioned (1051b1-2, τὸ δὲ κυριώτατα ὄν κτλ.) sense of truth and falsehood'. Similarly, the demonstrative τοῦτο (b6) refers to that special sense of true and false. Pressing the difference with the treatment of apophantic truth and falsehood (or true and false being as stated in affirmations and negations, respectively) in E 4, we can say that the main subject in  $\Theta 10$  is truth and falsehood attributed not to statements, but to things. In other words, unlike E 4, the present chapter does not deal with claims of truth and falsehood included in any statement-making, but ontic truth, and its counterpart, 'ontic falsehood', viz. non-being.

On the present interpretation, the opening lines of this chapter may be rendered thus:

*Met.* Θ 10, 1051a34-b6: What-is and what-is-not are said (1) with reference to the types of appellation, (2) with reference to the categories after their (τούτων) potentiality in contradistinction to their actuality, or the other way round, and (3) qua true and false being in the primary sense [i.e. as categorial modes of being]. To speak of truth and falsehood in the case of states of affairs (ἐπὶ τῶν πραγμάτων) depends [as we have seen in E 4] on things being combined or divided, so that he who thinks what is separated to be separated and what is combined to be combined is right, while he whose thought is in a state contrary to the state of affairs is in error. Now *when* is there true and false in the above sense present, and *when* is there not? We must consider what we mean by that type of true and false.

*Pace* Burnyeat (II, 156), there is no contrast to *Int.* 1, 16a9-18, *An.* III 8, 432a11-12, or *Cat.* 4, 2a4-10, since, in all these passages, combination and separation are treated as circumstances of the things such as conceived of by thought, not as restricted to their occurrences in the outside things irrespective of their being perceived.

## 11. 22 *The ontic truth of σύνθετα*

In the next few paragraphs, the distinction between ontic and statemental truth and falsehood is explained in several ways. It is first stated that true and false taken as ontic properties of things should not be regarded as depending on our cognitive acts, in a similar manner to that in which statemental truth and falsehood depend on thinking. Quite the opposite, our being right in thinking that you are pale is the extramental fact that you *are* pale (1051b6-9). From this angle, then, this alethic feature of categorial 'be' is to be characterized:

*Met.* Θ 10, 1051b9-17: If, then, some things are always combined and cannot be separated, while others admit of combination and separation, to be comes down to being combined, i.e. being one, and not to be comes down to being not combined, but a plurality. Therefore, as regards the things that admit of combination as well as separation, the same opinion and the same account comes to be false and true, and it is possible for that opinion at one time to be right and at another erroneous; but regarding things that cannot be otherwise the same opinion is not at one time true and at another erroneous, but the same opinions are always true and always false, respectively.

Since ontic truth and falsehood are described from the viewpoint of the apophantic truth and falsehood, which they are the basis of (as has been just emphasized), their characteristics are given in terms of opinion and its verbal expression. When speaking, then, of things

that can (or cannot) be combined or separated, subsistent things (whether named by substantive nouns or substantivated adjectives from non-substantial categories) and their admissible or inadmissible (essential or coincidental) attributes are intended.<sup>58</sup> Thus assertibles made up of 'man' *plus* 'pale', or 'pale' *plus* 'educated', or 'wood' *plus* 'white' will be admissible combinations, while 'man' *plus* 'irrational' or 'pale' *plus* 'incorporeal', or 'diagonal' *plus* 'commensurate' will not do; and so on for the contingent, necessary, and impossible separations, too. We have to realize that Aristotle is dealing throughout with combined states of affairs which can be (or actually are) found in the outside world, or are denied actual existence. The ontic combinations involved ('pale-man', 'rational-man', etc.) are said to be some one thing (ἐν εἶναι, 1051b12). And, it is often stated, being some one and definite thing is *the* indispensable condition for individual existence (my section 4.45).

### 11. 23 *The ontic truth of ἀσύνθετα*

Next, another kind of ontic oneness, namely that of incomposite things (ἀσύνθετα) or simples (ἅπλᾱ) comes up for discussion. The question is, then, what in their case the true-aspect of 'be' is. Aristotle emphasizes first that in this case any parallel with truth and falsehood in terms of combination and separation is out of the question. This means that, if truth and falsehood are something different from the previous kind, its counterpart 'be' must be, too:

*Met. Θ* 10, 1051b17-22: But with regard to incomposites, what is being and not being in the true-false variant?<sup>59</sup> It is not something composite, such as 'be' was in the case of combination, and 'not be' in case of separation — in the manner 'the-log's-being-white';<sup>60</sup> or 'the-

<sup>58</sup> Burnyeat (II, 158) seems to assume that a form such as 'righteousness' is not an οὐσία, as if there are no οὐσίαι apart from substances. The labels οὐσία and τί ἐστί are also used for non-substantial quiddities; see *Top.* I 9.

<sup>59</sup> Note the hendiadys τὸ εἶναι ἢ μὴ εἶναι καὶ τὸ ἀληθὲς καὶ τὸ ψεῦδος (where the first καὶ is expegetic and the second produces the hendiadys), and the subsequent singular ἐστί.

<sup>60</sup> The examples are commonly explained as statements ('the log is white'), instead of expressions indicating states of affairs, for no good reason. As a matter of fact, Ross's worries (II, 275-9) on the lines 1051b17-1052a4, which in his view contain much obscurity concerning the notions 'incomposite', 'simple', and 'inseparable', are mainly due to his mistaking 'simple apprehension' and 'naming' for 'judgement' and 'statement'. The way in which Owen (1965, *passim*), and Sorabji (1982, 298) speak of 'identity statement' is confusing; see my section 11. 4. *Pace* Ross, Bywater's supplying τὸ before ξύλον (analogously to the definite article τὴν

diagonal's-being-incommensurate'<sup>61</sup> are — and so truth and falsehood will no longer apply as in the previous cases either.

After all these negative approaches to the matter it is time to make a positive statement about how we have to view ontic truth in the case of incomposites. Aristotle proceeds by forwarding a reasonable suggestion.<sup>62</sup> Two things must strike the reader now. First, 'be' as ontic truth, and 'not be' as ontic falsehood, are once again described in terms of our cognitive operations; second, truth, not falsehood, is at the focus of his interest, whereas falsehood is actually described in terms of a lack of successful cognitive activity:

*Ibid.* 10, 1051b22-28: Should we say that, just as truth is not the same in these cases, so 'be' is not either? But that truth and falsehood are as follows: to accomplish contact<sup>63</sup> and to voice it (τὸ μὲν θιγεῖν καὶ φάναι) equals truth — I say *voicing*, for there is a difference between voicing and asserting (κατάφασις καὶ φάσις) — and to fail to make contact is nothing but ignorance.<sup>64</sup> For to be in error with respect to a thing's what-it-is (τὸ τί ἐστίν) is impossible, save in an incidental sense (κατὰ συμβεβηκός). And the same applies to incomposite ousiai; to be in error about them is out of the question.

That the incomposites are put on a par with the quiddities is of importance. This makes clear that by the incomposites the quiddities without matter<sup>65</sup> — enmattered forms, actually, that are stripped of their matter by abstraction ('subtraction') — should be understood, such as 'manhood' and 'paleness', or, in the mathematician's domain, 'line' and 'curvature'. As will be clear presently, the inclusion of matter — by taking, for instance, the form 'white(ness)' together with the matter it actually inheres in — may lead us to take the immaterial form \*'the white' (τὸ λευκόν) as denoting anything whatsoever, and thus expose us as being mistaken.

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before διόμετρον in the next example) is not necessary, because there is talk of *the* diagonal, and *a* piece of wood.

<sup>61</sup> The affirmative asserible containing a privative attribute is regarded as a case of separation.

<sup>62</sup> Introduced by ἢ in the sense of 'or should we say that'; see my *Index*.

<sup>63</sup> Note the contrast between the aorist θιγεῖν used resultatively and the *infinitivus praesentis* θιγγάνειν at b25, which goes with a *de conatu* (or repetitious) overtone.

<sup>64</sup> In the Greek text, there is a different word-order (so as to make 'ignorance' the subject term), which seems to be the result of stressing the notion 'ignorance' by anticipation. Hence my rendering 'nothing but ignorance'. To stress this makes good sense, because of Aristotle's intention to show that in this case there is no proper falsehood or error (ἀπατηθῆναι), but rather mere ignorance.

<sup>65</sup> Sorabji (1982), 297.

The restriction 'save in an incidental sense' (ἀλλ' ἢ κατὰ συμβεβηκός) has led to some discussion.<sup>66</sup> Ross rightly rejects Alexander's (600<sup>16ff.</sup>) suggestion (followed by Bonitz), that the phrase should qualify the use of the notion 'to be in error' and make us take it for 'being ignorant'. In light of *An.* III 6, 430b26-31, what is said in the present passage can be better explained as follows. Whenever the mind thinks of something in terms of its definiens applying to its quiddity, there is immediate knowledge of the quiddity as belonging to this particular thing. However, if one takes τὸ λευκόν (\*'the white') for the particular substance denoted by this phrase, the possibility of truth and error comes in — coincidentally, that is, since one still has perfect knowledge of the quiddity 'whiteness' itself.

This issue aptly exhibits the importance of the distinction between simple apprehension and naming, on the one hand, and judgement and framing statements, on the other. The above use of the phrase 'coincidentally' is commonly explained at the level of statement-making,<sup>67</sup> meaning that the possibility of error comes in if one attributes a quiddity to a subject by framing a statement '[x] is what is white' etc. Whoever takes things this way fails to see the μετάβασις εἰς ἄλλο γένος, since, by doing so, ontic truth becomes a case of statemental truth, so that the distinction between the two kinds of truth, which is the main subject of this chapter, completely disappears from sight. For this reason, any idea of statement-making should be abandoned, to make way for apprehension ('grasping') and name-giving.

Subsequently, the coherence between the various discussions found in Θ 1-9 and those of Θ 10 comes clearly to the fore in that the other feature of the categorial modes of being, viz. the actuality/potentiality item, is examined to further elucidate the natures of the forms-without-matter. They must be pure actuality, and not subject to coming to be and passing away.<sup>68</sup> The ontic, alethic forms are incorruptible and ungenerable, as being is itself beyond generation and corruption. As far as the pure (abstract, that is) forms are concerned, there is no question of being mistaken, but only of touching, or not touching, them:

<sup>66</sup> Reale II, 94; Ross II, 277; Burnyeat (1984), who offers three unsatisfactory suggestions (159).

<sup>67</sup> Ross, Tricot, Tredennick, and also Reale, who refers to the comments made by Thomas Aquinas, and the Renaissance commentator, Sylvester Maurus, *ad loc.*

<sup>68</sup> For the perpetuity of the Aristotelian form see above, re Z 8, 1033b17.



*Ibid.* 10, 1051b28-32: And they all *are* in actuality, not potentially; otherwise they would have come to be and ceased to be. But, as it is, be-ing as such [i.e. unqualified]<sup>69</sup> is not generated (or destroyed); if it were, it would be generated out of something.<sup>70</sup> Now with respect to whatever is precisely be-ing, and this in actuality, it is not possible to be in error; it is merely a question of grasping it or failing to grasp it.

This paragraph winds up with a sentence (1051b32-33) which has caused some confusion: ἀλλὰ τὸ τί ἐστὶ ζητεῖται [...] ἢ μή. Ross (II, 277f.) suggests an interpretation in light of H 3, 1043b23-28, where Aristotle refers to the theory of Antisthenes according to which one cannot define a thing's τί ἐστὶ, but only, say, ποῖόν τί ἐστίν, e.g. by saying of silver that it is *like* tin. So here Aristotle might possibly mean, he thinks, that inquiry about the *what* of simple entities takes the form of asking whether they are 'such-like' or not. Apart from the fact that it is doubtful (as Ross recognizes himself) whether this can be read into the demonstrative τοιαῦτα, this line of interpreting Aristotle's final remark does not get us anywhere, because it suggests some commitment to Antisthenes on Aristotle's part.

Bonitz conjectures an insertion of οὐκ before εἰ τοιαῦτα (which Alexander may have read, for that matter). On this conjecture, Aristotle's negative remark will hold the reader in suspense as to the question of what the inquiry *does* bear on. Eventually, Ross prefers to keep the traditional text, and to interpret the remark in light of the earlier reservation 'not but incidentally' of 1051b26. But then we are back to square one.

The sentence, I take it, contains an additional remark about the possibility of going beyond the basic level of unqualified be-ing, which was discussed in the previous lines, and the proposal of now inquiring into the incomposites' diversity qua different forms conveying different modes of being: "Yet, we do inquire about what they [the incomposites] are, viz. whether they are of such-and-such a nature or not". Such an inquiry, then, will bring about the different modes of being, *without* the material constitution they possess in the material things they inhere in. And as long as we keep abstracting from this material constitution, and are not led astray by — incidentally (κατὰ συμβεβηκός) — mistaking these forms for their enmattered

<sup>69</sup> The phrase τὸ ὄν αὐτό does not stand for any sublime 'being itself', let alone 'Being itself' (Tredennick), nor 'the pure form' (Ross II, 278): it merely refers to the basic sense of 'be' as contrasted with various modes of being as diversified over the ten categories.

<sup>70</sup> And this something *is* something, so that it entails the presence of being-as-such.

status, we will not assign them any denotation, so that there is no question of error either.

#### 11. 24 *A summary of the two kinds of truth*

Then follows a paragraph (1051b33-1052a4) which, at first glance at least, does not seem to develop the discussion any further.<sup>71</sup> I think Ross (II, 278) is perfectly right in observing that after the question of truth has been discussed (in 1051b22-33), in the present paragraph Aristotle treats the question of being. However, Aristotle's careless way of expressing himself has made his meaning seem more obscure than it really is, Ross rightly complains. Let us start with the text as it stands:

*Met.* Θ 10, 1051b33-1052a4: As for be-ing in the sense of truth, and not be-ing in the sense of falsehood, (a) there is (a<sub>1</sub>) truth in case of combination, and (a<sub>2</sub>) falsehood if combination is missing (εἰ μὴ σύγκειται). And, on the other hand, (b) the unity, if there is one, is of that nature, and if it is not of that nature, it is not at all. (b<sub>1</sub>) Truth boils down to grasping these objects by non-discursive thinking (νοεῖν), while (b<sub>2</sub>) <speaking properly> there is no falsehood or error, but rather ignorance; not, however, an ignorance which resembles blindness, for blindness is akin to a total absence of the power of thinking.

Remarkably enough, this passage is obscured by what, on the face of it, may be supposed to have been said in order to clarify its syntax. The ἐν μὲν of 1051b34 is, Ross assumes, not answered by a ἐν δέ, as is found elsewhere to indicate an enumeration ('first ... next'),<sup>72</sup> but by the phrase τὸ δὲ ἕν. However, this manner of balancing the construction, which is argued for by Ross (II, 278), would be rather odd. We should instead assume that the ἐν μὲν of b34 is answered by τὸ δ' right in b34-35, so that the result is no more than an enumeration of 'true' (ἐν μὲν) and its counterpart 'false' (τὸ δ'). In that case we should take the subsequent τὸ δὲ ἕν substantively, meaning 'the unity, on the other hand'.

On this interpretation, item (a) bears on statemental truth (a<sub>1</sub>), and falsehood (a<sub>2</sub>), while (b) is concerned with ontic truth (b<sub>1</sub>), which has ignorance (b<sub>2</sub>) as its second-rank counterpart. As before, ontic truth as well as its counterpart, ignorance, are described in

<sup>71</sup> Burnyeat (1984), 161.

<sup>72</sup> For Aristotle, *EN* VI 2, 1139a6-8; *Pol.* III 15, 1285b38-1286a1. Cf. *Pol.* IV 15, 1300a12-13 : (ἐν μὲν ... δευτέρον δ' ... λοιπὸν δὲ ("first ... secondly ... thirdly").

terms of cognition, but this by no means makes them apophantic. It is pertinent to distinguish between propositional ('apophantic') knowledge and knowledge by acquaintance (my section 11.4).

### 11. 25 *Our thinking about unchangeable beings* (ἀκίνητα)

The chapter ends with a paragraph on the unchangeable (τὰ ἀκίνητα), picking up the formal idea of 'being in error' from 1051b17-1052a4, but, materially, developing the discussion of the last part of 1051b2-17.<sup>73</sup> Aristotle points out that with regard to unchangeable things there is only room for error if we do not start from the correct definiens of a thing's quiddity, as a result of which we are not fully aware of the extension of the corresponding notion. In other words, if we have the right insight into a thing's quiddity, any error is out of the question; if we fail to realize that something is a member of the class whose quiddity we are familiar with, error is possible. For instance, if we suppose that the triangle is immutable we shall not think that at one time its angles are equal to two right angles while at another time they are not, for this would imply that it changes. But we *may* suppose that one member of such a class has a certain attribute, and another does not. For instance, owing to our defective notion of what the definiens of prime number is, we *may* (albeit erroneously) think that no even number is prime, or that some are primes and others are not; but regarding any single number it holds that we cannot be in error, thinking e.g. that this instance of number 17 is prime, and another is not. This holds irrespective of our actual (right or wrong) opinion. If e.g. we wrongly opine that 57 is prime, we cannot think at the same time that it at one time is prime, while at another it is not. We must regard its (putative) truth as eternal.

### 11. 3 *The main outcome of Books ZHΘ*

Let us now summarize the main doctrinal tenets of Books ZHΘ; the numbers indicate my above sections.

(1) As early as in the opening paragraph of Z 1 (1028a10ff.), the hendiadys formulas τὸ μὲν τί ἐστὶ καὶ τόδε τι (a11-12)<sup>74</sup> and ἡ οὐσία

<sup>73</sup> This is the view of ps.-Alexander CAG I, p. 601<sup>16</sup>ff., followed by Ross. Others (Sylvester Maurus, Bonitz, and Reale) assume that the section 1051b17-1052a4 is continued. See Reale II, 94.

<sup>74</sup> Also found elsewhere, e.g. GC I 3, 318b32.

καὶ τὸ καθ' ἕκαστον (a27) refer to the complex idea of 'particular qua possessing this or that particular form'. The definitive solution to the true ousia problem developed in Z 10-16 is here anticipated (my section 8.1).

(2) The core of the problem is countered later on (9. 46) by introducing the device 'primitive appellation' (1032a5: τὰ πρῶτα καὶ καθ' αὐτὰ λεγόμενα), which refers to the 'immediate' or 'comprehensive' ousia, i.e. the specific form which encompasses the whole of the essential features making up a thing's quiddity (9.66).

(3) By the notion of 'comprehensive ousia' the contradistinction found in the *Categories* between πρώτη and δευτέρα οὐσία is surpassed (9.11).

(4) From now on, the label πρώτη οὐσία (or τὸ πρῶτως ὄν) is used to stand for the 'immediate' or 'first named' specific form as enmattered in this or that particular; by the same token, the particular possessing this particular form is referred to (which must remind us of the doctrine of *Cat.*, ch. 5). The πρώτη οὐσία of the *Metaphysics* is first both in the order of existence (like it is in the *Categories*), as well as in the order of logico-semantic analysis (9.11 and 9.66).

(5) Matter can be called ousia to the extent that when something is conceived of as deprived of all its determinations, its 'being there' ('hyparxis') still remains as an underlying thing (ὑποκείμενον). This should not be understood in terms of sentence predication (saying e.g. 'Matter is substance', let alone 'Substance is matter'), but of naming and appellation. For instance, when they are deprived of any of their determinations, Socrates or this tree or whatever other subsistent entity can be called up by the expression 'this <chunk of> matter'. That is why, in our metaphysical search for true being, the claim made by matter and hypokeimenon for being the true ousia must not be rejected without further ado (9.23). None the less, its credentials are eventually nullified (9.24).

(6) Using the notion of 'comprehensive' ousia must not make us blind to the problem of acquiring true (epistemonik) knowledge, for which to grasp the 'universal' is required (9.4-9.5). The requirements are stated for obtaining true knowledge: the particular should be brought up by its 'primitive appellation', that is to say, the designation after the first class it essentially belongs to (9.6-9.7).

(7) The problem of whether matter should be included in a composite's definiens is solved by distinguishing two kinds of definition, one focussing on a thing's material component, the other on its 'material

constitution', i.e. its general condition of materiality or extensionality (9.53; 10.2; 10.4-10.5; 10.73; 11.12-11.15).

(8) The forms in the particulars are strictly particular (individual), not universal. Their universal status is merely a logical construct, produced by subtraction and serving for the sake of true (epistemonik) knowledge as argued for in the *Posterior Analytics Met. Z*, chs. 13-16 firmly state that no universal is ousia (9.72 and 9.75). This does not alter the fact, however, that no particular can be properly defined *qua particular* (9.53-9.54; 9.71-9.72; 9.74; 10.71).

(9) In *Z* 17 and *H* 1-6, the true ousia so eagerly looked for throughout the *Metaphysics* is finally identified as the enmattered particular form. The notion of comprehensive ousia once again leads Aristotle to assess matter as 'material constitution' (10.2), as well as the *eidos* in its capacity of being the dynamic force actualizing this or that particular chunk of matter (10.3).

(10) The enmattered form is the principle of individuation, rather than just matter (10.72).

(11) 'Actuality' is defined as a thing's 'being-in-complete-realization', and so opposed to 'potentiality', which is a thing [*x*]'s state of being that includes the possibility of becoming (being) something else, [*y*]. In the context of the search for the true ousia, the discussion must centre on naming and appellation: 'When can what is actually an [*x*] be called up as a potential [*y*]?' This investigation boils down to linguistically putting the ontic status of a thing's material to the test; in this context, 'material constitution' is examined in terms of matter's potentiality (11.11-11.15).

(12) Matter and form — now taken as potentiality and actuality — are intimately related; in particular matter is directed towards the intended form (11.12).

(13) *Θ* 10 discusses truth and falsehood *qua* features of 'be' in the primary sense. Thus its main object is truth and falsehood attributed to things, that is to say, it deals not with truth claims (as does *E* 4), but with truth as an ontic property in things designated after the various modes of categorial being; in this context, non-being *qua* 'ontic falsehood' is examined (11.21).

(14) In spite of the fact that the ontic properties, truth and falsehood, are baptized in terms of true and false opinion, they surely do not themselves depend on cognitive acts in a similar manner to that in which statemental truth and falsehood depend on thought (11.21).

(15) Along this line of thought, 'to be' equals 'to be combined, or, one', while 'not to be' boils down to 'being not one, but a plurality'. This ontic unity is found both in σύνθετα, i.e. things necessarily combined or separated, as well as in incomposites (ἄσύνθετα) or simples (ἄπλᾶ), i.e. quiddities without matter, that is to say, enmattered forms stripped of their matter by subtraction (11.22-11.23).

(16) In terms of the potentiality/actuality opposition the nature of the forms-without-matter is described as 'pure actuality', not subject as such to coming to be or passing away (11. 23).

(17) Having grasped a thing's quiddity, any error is out of the question. Only if we fail to be aware of a thing's membership of a class whose quiddity we are familiar with is error possible (11.25).

(18) Throughout the discussions found in ZHΘ Aristotle's semantic approach comes to the fore. There is only subsistent being, which is endowed with a plurality of modes of being. Different 'beings' only come into the picture when (and in so far as) one and the same subsistent thing is called up one time by a name (appellation) signifying an item from the first category, another time by names (appellations) conveying items from one or more non-substantial categories (9.1; 9.31; 9.42; 10.4; 11.12).

#### 11. 4 *An excursus on ontic truth and non-propositional thought*

In a fascinating paper Richard Sorabji (1982) exposed what he baptized "myths about non-propositional thought". It aims to undermine the common idea that non-discursive thinking does not involve entertaining propositions, that is to say, it does not involve thinking *that* something is the case, and, instead, one contemplates concepts in isolation from each other, and does not string them together in the way they are strung together in *that*-clauses. It is commonly held that Plato and Aristotle anticipated Plotinus in postulating this kind of non-propositional thinking.

As for Aristotle, Sorabji (1982, 296ff.) argues for the position that Aristotle's view of thinking the 'incomposites',<sup>75</sup> despite their being non-discursive thought, is propositional.<sup>76</sup> Following A.C. Lloyd's exposition<sup>77</sup> of the current idea, it is stated that non-discursive thought

<sup>75</sup> The ἄσύνθετα of Θ 10, and the ἀδιαίρετα of *An.* III, 6.

<sup>76</sup> In Sorabji (1983), 137-56, the supposed myth about non-propositional thinking is discussed in a historical perspective (Plato to Plotinus).

<sup>77</sup> (1969-70), 261-74, where the idea of non-discursive thought, as it is

involves contemplating things in isolation without thinking anything *about* them.

On this description of non-discursive thinking, the question may arise why it should be supposed that, when speaking of our thinking of incomposites — in which, admittedly, there is no assertion at all (*Met.* Θ 10, 1051b24; cf. *An.* III 6, 430b28) —, Aristotle must have the contemplation of isolated concepts in mind. Sorabji is of the opinion that there is no good reason for it, and thinks a better interpretation is available.

I can fully agree with Sorabji (297f.) that Aristotle's 'incomposites' are forms-without-matter. Likewise, I can only welcome his fine observations (301-6) about Aristotle's general theory of thinking. But on his main point, which is represented in the title of his paper, I cannot go the whole way with him, in so far as he identifies the thinking of composites as 'propositional thought'. In fact, Sorabji regards Aristotle's non-discursive thinking as involving the *definitions* of incomposites. In a similar vein, he uses 'proposition' and 'propositional' as equivalents of 'statement' ('assertion') and 'statemental', just as he fails to take 'definition' in the sense of 'definiens'. On this interpretation, he seems to find due support in the texts, which really contain clear references to our knowing the *quiddities*<sup>78</sup> of the incomposites as they are grasped by definitions. Sorabji infers from this that therefore this thinking must be propositional, since, still in his view, it boils down to thinking *that* such-and-such an essence belongs to such-and-such a subject. He has to explain, now, how this can be squared with Aristotle's explicit claim that there is no asserting, nor predicating something of something.

Sorabji (298) answers this question by identifying Aristotle's definitions not as simple definientia, but as 'statements of identity', and explaining the procedure of thinking incomposites in terms of such statements, joining Owen's opinion that Aristotle sometimes views statements that bring up the essence of something, or part of its essence, as '*identity* statements'. E.g. at *Met.* Z 11, 1037a33-b7, Aristotle is talking of a subject which is not a compound of form *plus* matter; here at least, he says, the subject-substrate is identical with its essence. Such statements, then, "do not require us to predicate one thing of another, but involve simply referring to the same thing twice", which is not assertion or predication as Aristotle usually understands it.

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commonly understood, is criticized as incoherent.

<sup>78</sup> *Met.* Θ 10, 1051b26 and 32; *An.* III 6, 430b28.

Thus the core of Sorabji's solution to the intricate question "Why propositional, although not in the manner of asserting?" is his refuge to 'identity statements', "which do not require us to predicate one thing of another" — of something else, that is — but merely "involve simply referring to the same thing twice" (298). I am afraid Sorabji is completely mistaken on this score. For one thing, he confuses 'referring' and 'asserting', as a result of his putting 'definiens' and 'definition' on a par.

To begin with, it is important to have a clear view of these items. In the definition 'man is a two-footed animal', 'man' is the definendum, and 'two-footed animal' the definiens. When attempting to define 'man', we are not in search of its definition, but its definiens. To properly define something is a *non-propositional* procedure which consists in analysing the notion conveyed by the term signifying the object under discussion (e.g. into genus and differentia). Admittedly, this stage can be (and nearly always is) followed by framing a definitorial statement about them, but this is not fundamental to the procedure of defining. Throughout the present study we have experienced the importance of the difference between statement-making and naming and, correspondingly, between assertion and assertible.<sup>79</sup> In point of fact, what Aristotle is doing in the *Metaphysics*, and elsewhere as well, is denoting ('naming', 'appellating') outside things by their proper definiens to find their true ousia. After identifying them by denotation (i.e. by using their proper definiens as denotans), not by a statement ('asserting'), he goes on to further analyse this definiens, and, eventually, frames conclusions (which, admittedly, *are* statements).<sup>80</sup>

### 11.5 Some relevant passages from *Met. M* and *N*

The last two books (M and N) of *Met.* present Aristotle's views about the nature and status of mathematical entities.<sup>81</sup> These views are

<sup>79</sup> My section 2.16. Besides, 'referring to the same thing twice' is still something different from a propositional procedure; and the latter is, by definition, subject to truth-values.

<sup>80</sup> Of course, the interesting problem of what to understand by animal φρόνησις and σύνεσις in Aristotle (see J.-L. Labarrière in Devereux & Pellegrin (1980), 405-28) should also be solved in terms of non-propositional awareness.

<sup>81</sup> For impressive assessments see e.g. Annas (1976), 26-77; Cleary (1995), *passim*.



stamped by Aristotle's clear and unwavering hostility towards Platonism, and his dislike for subsistent eternal entities in particular, an attitude he displays in his other works as well. His strategy basically consists in exposing the absurdity and superfluity of such entities. It will not come as a surprise, then, that Books M and N contain many references to the author's own down-to-earth ontology as the most effective remedy against any idea of transcendency. Thus these books are most welcome in order to supplement our knowledge of Aristotle's ontology of the sublunar world.<sup>82</sup>

### 11. 51 *Do eternal immaterial Substances exist?*

In the opening chapter of Book M Aristotle reminds us of his treatment of the perceptible entities, and introduces the present subject of inquiry as the search for the status of unchanging and eternal entities, if there are any such things over and above the perceptible ones (πότερον ἔστι τις παρὰ τὰς αἰσθητὰς οὐσίας ἀκίνητος καὶ αἰδῖος). In his usual way he proposes to start off with the views of his predecessors, "so as to avoid any of their mistakes, and also without fear of being secretly annoyed with ourselves if we appear to share any opinion with them; for one must be content to state some things better and others no worse" (1076a8-16).

The possible candidates for being the aforesaid imperceptible, eternal entities are the mathematical entities and the Platonic Forms. Some people identify the Forms with the mathematical, while others posit them as distinct kinds (γένη). Chapter 2 presents Aristotle's criticisms of the Platonist conception of the status of the mathematical, which is followed by the author's own alternative account in chapter 3; chapters 4 and 5 are devoted to Aristotle's criticism of the Transcendent Forms (taken over, with minor alterations from Book A, chapters 6 and 9). Chapters 6-9 deal with cognate problems, particularly the different views of Form Numbers, and chapter 10 with the general problem of individuality and knowability that was raised as the twelfth aporia in Book B (6, 1003a5-17), in conjunction with the ninth aporia (*ibid.*, 4, 999b24-1000a4).

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<sup>82</sup> Annas gives (1976, 78-88) a clear account of the structure of Books M and N, including pertinent criticism of Werner Jaeger's theory about it.

11. 52 *On the status of mathematical entities*

In his criticism of Platonism in chapter 2 (1076b11- 1077b11), Aristotle tries to show that Plato's conception of mathematical entities is untenable, and that Platonists wrongly regard abstract entities as more fundamental from the viewpoint of ontology than concrete particulars. Small wonder then that, like the Forms, the mathematical, in so far as they are *more platonico* conceived are deemed by Aristotle to be idle reduplications of the concrete particulars occurring in the world outside. From 1076b39 onwards Aristotle's strategy of argument is of general philosophic interest.<sup>83</sup> If mathematical are separate entities in themselves, then the disciplines cognate to mathematics, like astronomy, optics, and harmonics, must also be about ideal objects which are separated from concrete, perceptible things, in order to meet the general conditions for true knowledge. The core of his argument is that the Platonists seem to characterize the diverse disciplines in terms of their different objects instead of the different method each of them use to address the same objects, to wit the concrete particulars. In principle, to Aristotle it is all a matter of different ways of focalization and categorization concerning one and the same outside particular.

In 1077a36-b11 Aristotle's argument takes a clearly semantic turn by drawing attention to the conceptualization of mathematical, thus addressing "the nub of his dispute with the Platonists about mathematical objects".<sup>84</sup> Even if mathematical properties may be semantically prior to the particulars they inhere in, Aristotle argues, it does not follow that a mathematical, say, a number or line, ontologically surpasses the concrete particular which possesses the property of being countable or having lines ('being \*lined'). He warns us that semantic priority does not always coincide with ontological priority. What he means to say is that whenever with reference to conceptualization a certain component is predominant, it is only in cases in which that component signifies a mode of subsistent being that it will refer to something existing in its own right. In other words, granting that the mathematician's conceptualization focusses on a particular's properties ('modes of being') like countability, this does not alter the fact that such a mode of being ontologically is still coincidental and thus posterior to the particular's subsistent mode of being; and,

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<sup>83</sup> Annas (1976), 142f.; Cleary (1995), 288-307.

<sup>84</sup> Cleary (1995), 301.

accordingly, the use of such designations does not require the existence of subsistent Number, Line, and so on.

To make his intention clear Aristotle goes on to use his favourite example of the conceptualization of a pale-complexioned person, who is designated by the composite expression, 'pale man', consisting of a substrate-term *plus* attribute.<sup>85</sup> Whoever wants to refer to someone, e.g. Socrates, not in his capacity of being wise or bald or Sophroniscus's son, but just qua pale, will call him 'pale man', thus giving the coincidental property, paleness, semantic predominance over the concept 'man'.<sup>86</sup> However, this by no means implies that his paleness is ontologically prior to his manhood, and thus must be endowed with subsistency over and above his being a particular man, and the particular paleness inherent in him. Quite to the contrary, it still remains natural to modes of being that are signified by attributive terms that they cannot have separate existence in the same way subsistent modes can. Paleness, wisdom, baldness and their like can only exist in an underlying subsistent thing or hypokeimenon, so that the use of this sort of term implies that there is some appropriate underlying thing, while, from the semantic point of view, our use of substantive terms does not entail the existence of anything whatsoever to underly them; what these terms refer to is self-supporting:

*Met.* M 2, 1077a36-b11: Let it be granted that they [i.e. the mathematical] are prior in designation [sc. to the particular they inhere in]. But <you have to be aware that> not everything prior in designation is also prior in beingness (τῇ οὐσίᾳ πρότερον). Things are prior in beingness <to other things> if they surpass them in existing separately, and prior in designation to things whose designations contain theirs as a part. But these two priorities do not fall to the same thing together. For given that properties, e.g. in case of something <being designated as> 'moving' or 'pale', do not exist apart from their substances (παρὰ τὰς οὐσίας), then \*'the pale' is prior in designation (κατὰ τὸν λόγον) to 'pale man', but not in beingness and subsistence (κατὰ τὴν οὐσίαν), since <what is designated by><sup>87</sup> it [i.e. \*'the pale'] cannot exist separately (κεχωρισμένον) but exists always together with the compound (τῷ συνόλῳ); by compound I mean the man who is pale (τὸν ἄνθρωπον τὸν λευκόν). Hence it is clear that the property resulting from subtraction (τὸ ἐξ ἀφαίρεσεως) is not prior, nor that

<sup>85</sup> When she spoke (1976, 147) of Aristotle's example of priority in definition as "disappointingly simplistic", Annas failed to see Aristotle's point, I think. In a later publication (1987) she acknowledges the special semantic point of Aristotle's argument. For the 'pale man' issue see my section 9.32.

<sup>86</sup> Unlike English, the Greek idiom even allows to call him up as τὸ λευκόν = \*'the pale', period.

<sup>87</sup> For the need of this kind of suppletion see my section 1.71.

resulting from addition (τὸ ἐκ προσθέσεως) posterior; for <speaking of addition> it is by addition to the designation, \*‘the pale’ that there is talk of ‘the pale man’.

The same view is found in the *Lexicon* where the various meanings of ‘prior’ and ‘posterior’ are listed (*Met.* Δ 11); “With reference to designation (κατὰ τὸν λόγον) the coincidental is prior to the whole thing (τοῦ ὅλου), as for instance \*‘the educated’ to ‘the educated man’. For without the part [i.e. ‘educated’] there will not be a complete designation. And yet the property of being educated cannot occur without there being an educated something”. Again, if one of a particular’s coincidental modes of being is semantically focussed on this should not lead us to think that this mode of being has *eo ipso* ontological priority, too. This distinction between semantic and ontological priority plays the key role in the search for true being in *Met.* Z, particularly chs. 1 and 4-5. It is claimed there that in any designation, whether a definiens or just a describens, that of an underlying thing supporting the form (‘mode of being’) expressed by the designation is included. As at M 2, 1077b2ff., the ontological posteriority of the coincidental modes of being is explained in terms of the incapability of being in their own right or being separated from their hypokeimenon, i.e. the particular as possessing this mode of being (ἡ οὐσία καὶ τὸ καθ’ ἑκάστων).<sup>88</sup>

### 11. 53 *Aristotle’s own view of the status of mathematical*

In chapter 3 Aristotle presents his own alternative account of the ontological status of mathematical entities.<sup>89</sup> His solution to the problem turns out to consist in minutely employing modified designations of the object under examination by means of the *qua*-locution.<sup>90</sup> Just

<sup>88</sup> *Met.* Z 1, 1028a20-31; my sections 9. 11 and 9.31-9.33; *ibid.*, 1028a35-36: “For any thing it holds that in its account its being is included” (my section 1.64). Cleary (1994, 304) seems to have a blind eye to the semantic purport and force of Aristotle’s argument against the Platonists’ claims about the ontological status of mathematical.

<sup>89</sup> See for this issue also Van Rijen (1989), 150-62.

<sup>90</sup> Cleary (1995, 312-18) has well observed that “the key to Aristotle’s answer lies in the *qua*-locution and in a related method of subtraction, both of which are to be found in the *Posterior Analytics* (I, 5)”. Wolfgang Wieland (1962, 197ff.) was the first to draw our attention to Aristotle’s use of the *qua*-locution to escape the danger of hypostatizing attributes as Plato did. He rightly pointed out that this device permitted Aristotle to consider them as just aspects of a substrate. To Wieland (*ibid.*, 213) the use of the *qua*-device involves a radical and decisive critique of Plato for confusing things and their qualitative aspects. Cleary (1995), 315, n. 104.

as general approaches in mathematics, he argues (1077b17-22), do not concern separate entities over and above magnitudes and numbers, but are about these, only not *qua* being such (οὐχ ἡ δὲ τοιαῦτα) as to have magnitude or be divisible ('countable'), evidently it is also possible for there to be accounts and proofs about perceptible magnitudes, but taken not *qua* perceptibles but in their capacity of being such-and-such<sup>91</sup> (μὴ ἡ δὲ αἰσθητὰ ἀλλ' ἡ τοιαδί). Next the diverse ways of bringing up things are developed in a broader semantic context:

*Ibid.* M 3, 1077b22-30: For just as there are many *modi operandi* (λόγοι)<sup>92</sup> about things merely *qua* moving, irrespective of the quiddity of them in such a capacity (τῶν τοιούτων) and of their <other> coincidental modes of being, and this does not mean that therefore there must be either some moving entity separate from the perceptibles, or some such determinate nature in them – so also in the case of moving things there will be theses and branches of knowledge about them, not taken *qua* moving, but only *qua* bodies, or only *qua* planes or *qua* lengths, or *qua* divisible, and indivisible but with position, and just *qua* divisible.

1077b34-1078a9: And just as it is true to say in an unqualified sense of other disciplines that they are about this or that, not taken in a coincidental mode of being (for instance <medicine> about paleness if the healthy thing is pale, while it [i.e. the discipline in question] is about health), but about that which each discipline has as its proper object: if it is about its object *qua* healthy, then it is about health, whereas if it is about its object *qua* man, then it is about man —so it is true to speak in a like manner of geometry. I do not mean that,<sup>93</sup> given that the mathematical disciplines are about what happens to be perceptible but not *qua* perceptible, they are *not* about perceptibles; but I do not mean that they are about other separate entities over and above these perceptibles either. Many a property falls to things in their own right (συμβέβηκε καθ' αὐτὰ τοῖς πράγμασιν), i.e. *qua* being, each of them, of this or that nature (ἡ ἕκαστον ὑπάρχει τῶν τοιούτων). For instance, proper attributes fall to the animal *qua* female or *qua* male, but none the less there does not exist some female or some male [i.e. some femaleness or maleness] separate from the animals in question.<sup>94</sup>

<sup>91</sup> I.e. those things being taken in one of their more generic capacities as envisaged in the general *modus operandi*.

<sup>92</sup> The word is here used, I take it, to stand for intellectual approaches covering both statements, theses, and proofs.

<sup>93</sup> The negative particle οὐκ at 1078a2, which is counterbalanced by οὐ μέντοι οὐδέ at a4, is pregnantly used, meaning 'it is not the case that' or 'I do not mean that', while its counterpart stands for 'but I do not mean either'.

<sup>94</sup> My rendering of the definite article; see Verdenius (1981), 351, and Kühner-

Aristotle goes on to draw a general conclusion (1078a17-21) that if one posits modes of being taken apart from what is coincidental to them<sup>95</sup> and studies them as such (ἢ τοιαῦτα) one will not for this reason assert a falsehood, any more than if one draws something in the sand and calls it a foot long when it is not a foot long; for the falsehood is not that which is put forward (ἐν ταῖς προτάσεσι). Presumably, Aristotle means that mathematical propositions are true regardless of whether or not the sensible diagrams that are meant to illustrate those propositions perfectly represent them.<sup>96</sup>

#### 11. 54 *No separate existence should be assigned to universals*

In the concluding part of chapter 9 (1086a21-b13) Aristotle sets out to deal with the views of people who assert that there are other subsistent entities over and above the perceptible ones (παρὰ τὰς αἰσθητὰς ἑτέρας οὐσίας). One position among them is given special attention, viz. that of the believers in Forms. The problem is that, at one and the same time, they posit the Forms (τὰς ιδέας) as universal and again treat them as separate and individual; that this is untenable has been argued before (B 6, 1003a7-17). The reason the believers in subsistent universal entities combined these properties into one thing is that they took subsistent entities as non-identical with perceptible things. They were of the opinion that the individual things in the sensible world are in a state of flux and none of them persists, but

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Gerth I, 593. There is an interesting passage in *EN* VI 8 where Aristotle (1142a11-20) ascribes youngsters' ability to become a mathematician and their inability to operate in practical matters to the fact that they easily take mathematics apart from the physical objects they inhere in, — a procedure, however, that is not feasible in practical matters.

<sup>95</sup> This formula covers everything coinciding with the mode of being under consideration, not only 'fellow-attributes' (Ross, *ad loc.*), but also, on occasion, the thing's subsistent mode of being, which can also be said to 'go together with' the thing's aspect in question. In mathematics in particular there may be the possibility of attributes themselves underlying other attributes.

<sup>96</sup> Cleary (1995), 330. Cf. *Cael.* III 1, 299a13-17; *APo.* I 10, 76b39-77a3; *An.* I 1, 403b14-15; III 4, 429b18-20; 7, 431b12-16; 8, 432a2-10; *Met.* K 3, 1061a28-b3; N 2, 1089a22-23. The common rendering 'in the premisses' is odd. Rather, what is meant is: 'that which is put before you as a concrete figure or drawing or sketch'. Likewise (*pace* Annas 1979, 203) at *Met.* N 2, 1089a24-25, Aristotle does not mean to say: "The enunciation is extraneous to the inference" (*Oxford Translation*), let alone something odd like "The premiss is not part of the syllogism", but that the particular drawing is extraneous to the reasoning. Compare Plato's view of the use of drawing mathematical figures; *Rep.* VI, 510D.

that the universal both exists over and above them and is of a different nature (ἑτερόν τι εἶναι).

Aristotle then recalls his discussion in chapter 4 about how Socrates gave the impulse to this theory through his definitions, but at least did not separate the universal definitia from the individuals, and also how in this respect he was right in not separating them. This is clear from the results: for without the universal it is impossible to obtain true knowledge; but separating them from the individuals causes the difficulties that arise with regard to the Forms. The thing is that because his successors — once given that (εἴπερ) there must be<sup>97</sup> some subsistent entities over and above the perceptible ones and those in flux — took it to be necessary that these should be separate. And since they had no others available, they elevated (ἐξέθεσαν)<sup>98</sup> these universally assignable modes of being (ταύτας δὲ τὰς καθόλου λεγομένας, sc. οὐσίας). And from this it followed that universals and individuals were almost the same sort of thing (τὰς αὐτὰς φύσεις εἶναι). This in itself would be a problem for the Platonists' view (1086b2-13).

### 11. 55 *The problem of universals*

However, Aristotle agrees that the aforesaid problem may be raised in more general terms. In the concluding chapter of Book M, therefore, he sets out to deal with the underlying problem which must also be the concern of those who do not believe in Platonic Forms.<sup>99</sup> In its broader context the previous problem is in fact what we know as the everlasting problem of universals. In the twelfth aporia of B 6 Aristotle raised the question whether the ontic principles are universal or such as we describe particulars as being (1003a5-7). In that passage the gist of the problem was disclosed in terms of the problem of the plurality of forms requiring a unifying factor: if ontic principles are Platonic Forms which are not only ontic causes but also the principles of true knowledge, then these two features will require that they should both be individual (a 'this' as is

<sup>97</sup> For the future tense as expressing necessity or at least what is surely going to happen see Patzig (1969), 18; Van Raalte (1993), 335.

<sup>98</sup> Ecthesis is discussed in my sections 6.23-6.25.

<sup>99</sup> The twelfth aporia of *Met.* B 6, 1003a5-17; cf. the ninth one at 4, 999b24-1000a4; my section 7.22. There is a pertinent discussion of 1086b14-1087a25 in Leszl (1972), 286-98, and also in Madigan (1999), 92-7; 119-31.

every ousia) and universal at the same time. But these features are mutually incompatible.

In the chapter under consideration, the problem is stated not in terms of their mutual incompatibility but by showing that either feature as assigned to the Forms conflicts with the idea of their separate existence. First their being individual is shown (1086b20-37) to be untenable, since (1) there will be a plurality of *subsistent* ontic components (the later issue of *pluralitas formarum*) and (2) these components will be, qua individual, not knowable. The second item is worded thus:

*Met. M* 10, 1086b32-37: Further, the elementary components (τὰ στοιχεῖα) will not be knowable, because they are not universal, while true knowledge is of universals. This is clear from epistemonik proofs (ἀποδείξων) and the procedure of defining (ὀρισμῶν). For there cannot be a real deduction that this triangle at hand is 2R, nor that this man here is an animal, unless every man <is shown to be> an animal.

If on the other hand ontic principles (among which the supposedly transcendent Forms) *are* universal, then either the subsistent things (οὐσίαι) that come from them are also universal, or there will be some non-ousia (μὴ οὐσία) prior to the the subsistent thing (πρότερον οὐσίας). For a universal is not a subsistent thing (οὐκ οὐσία), while an elementary component or ontic principle *is* universal, and a thing's component or principle is prior to the thing whose component or principle it is (1086b37-1087a4).

Of course, this problem area deserves any philosopher's attention, as was said in the opening lines of the present chapter. Aristotle had already solved it in Book Z<sup>100</sup> by pointing out that a thing's proper ontic principle or *eidos* is an individual dynamic principle immanent in it, while its universality merely comes down to the fact that the name expressing this *eidos* is (in principle) universally assignable to other instances possessing a kindred (equally individual) instantiation. In the next few lines Aristotle applies what he has put forward in 1086b20-1087a4 in order to argue against Plato's doctrine of the separate Transcendent Forms. He points out (1087a4-9) that all the aforesaid difficulties are inevitable for those who make the Forms (τὰς ἰδέας) be composed of elementary components and at the same time (τε ... καὶ) postulate that there is a single separate entity over

<sup>100</sup> My sections 9.4; 9.6-9.7.



and above the subsistent things possessing the same *eidos* (παρὰ τὰς τὸ αὐτὸ εἶδος ἐχούσας οὐσίας). Such a procedure is bound to lead to infinity, because there is nothing to stop the series.

Aristotle concludes the chapter by showing that there is a way out of the aforesaid difficulties (1087a10-25).<sup>101</sup> The thesis, he argues, that any true knowledge is universal, so that the principles of the things there are (τὰς τῶν ὄντων ἀρχάς) — the familiarity with which is at the very basis of genuine knowledge — must also be universal, and that at the same time<sup>102</sup> they are not separate entities, indeed contains the greatest problem among those mentioned. Ross (II 466, *ad loc.*) well observed that Aristotle means to say that this position presents the greatest difficulty, not only to the Platonists but to everyone, whatever his views about Forms may be (cf. 1086b15), and therefore proceeds to modify what he has said (τὸ λεγόμενον), i.e. the first part of the thesis, viz. that any knowledge is universal (which was explicitly stated at 1086b33).<sup>103</sup> The correct understanding of this position will take away the paradox contained in the second part of the thesis ('that the ontic principles nevertheless are not separate entities').

The paradox disappears if the thesis is understood in the correct way (1087a14-15: "The thesis is true in one way but not in another"). The gist of the problem is: can particular entities ('individuals') be truly known? In order to come up with the correct answer, we should make sure to interpret the term ἐπιστήμη in the right way. In the next few lines Aristotle tries to make it clear that there is a sense in which there is true knowledge of individuals, namely, in the sense in which the individual entity is known qua actualization of the feature (property) in question, which as such, i.e. taken formally, is universally applicable. It is common doctrine in Aristotle that particulars are knowable and thus can be objects of epistemonical proof if they are taken qua possessing the particular instantiation indicated by the universal term.<sup>104</sup> What is peculiar in Aristotle's present exposition is

<sup>101</sup> Annas (1979), 190f.

<sup>102</sup> For καί expressing simultaneity see Liddell & Scott, s.v. III, 3. In our text it is important to take heed of the simultaneity because it may be unexpected ('and yet').

<sup>103</sup> And frequently elsewhere, e.g. *APo.* I 31, 87b31; *An.* II 5, 417b23; *Met.* B6, 1003a15; K 1, 1059b26; 2, 1060b20; M9, 1086b5; *EN* VI 6, 1140b31; X9, 1180b15. Compare the places where true knowledge and epistemonical proof are denied to perceptible things; Bonitz, *Index*, 20b25-52.

<sup>104</sup> My sections 2.71; 9.71; 9.74; 10.4; 10.71-10.75.

only (*pace* Ross)<sup>105</sup> that it is presented in terms of the contradistinction ‘potential/actual’:

*Ibid.* 10, 1087a15-18: Knowledge, like knowing, is of two kinds, one potential, one actual. Potentiality, which is, qua matter-like, universal and indeterminate, is <accordingly> of what is universal and indeterminate; but actuality, which is determinate, is of something determinate, and being a ‘this’ (τὸδε τι) it concerns a ‘this’ (τοῦδὲ τινος).

Potential knowledge of something, I take it, must be understood in terms of the object (to be) known. Just as matter as such is indeterminate and does not actually exist, but may through actualization arrive at being ‘this’ or ‘that’, so knowledge of a universal form can only be actualized if there is an actual knowing of this form *qua enmattered* (as a particular instantiation) in a particular. On this view, actual knowledge is always of a *particular* instantiation of a *universal* (i.e. universally assignable) property. One should realize, time and again, that to Aristotle, the phrase ‘universal property’ bears on *particular* properties viewed in their capacity of being (in principle) universally applicable. The significance of the pivotal notion of ‘viewed in its universal applicability’ is then developed. It is argued that the universal applicability of something’s ontic property is only coincidental to the thing’s proper being, and to make this thoroughly clear Aristotle gives examples of sensation and of a study of a particular syllable, ‘A’:

*Ibid.* 1087a19-21: It is only<sup>106</sup> coincidentally (κατὰ συμβεβηκός) that sight sees universal colour in the sense that (ὅτι)<sup>107</sup> *this* colour which it sees is ‘colour’, and that the grammarian’s object of study, viz. this A is an A.

Finally, Aristotle (1087a21-23) points out that, given that the ontic principles must be universal (read ‘universally occurring’), it is also

<sup>105</sup> Ross (II, 466) thinks that the modification of the notion of ἐπιστήμη which is the core of the solution to the ‘individual/universal’ problem as presented here, is contrary to Aristotle’s usual view, which is that actual knowledge is of universals. One should realize, however, that here, as elsewhere, it is argued that the actual knowledge of a particular concerns the thing’s particular property taken as universally applicable to other instances possessing it. In other words, the particular is truly known *qua* satisfying the universal property.

<sup>106</sup> For the omission of μόνον see Verdenius (1981), 348; 351.

<sup>107</sup> This explicative sense of ὅτι (indicating not the reason for what precedes but its content, something like ‘consisting in the fact that’) should be regarded as a mixture of its two main senses, ‘that’, introducing an object clause (Liddell & Scott, s.v. A I-V) and the explicative ‘because’ (*ibid.*, s.v. B2). Compare my discussion of ὅτι in section 2.7.

necessary that what comes from them should be necessary, as is also the case with epistemonical proofs. As elsewhere, Aristotle's manner of expressing his intention is here rather elliptical. The comparison with ἀπόδειξις suggests that just as in epistemonical proof the particular is brought up as satisfying the definiens of a *universal* property [*x*] or [*y*], but is still itself one of its *particular* instances, likewise the (logical or formal) universality required for there actually being genuine knowledge is only to be found in particular beings taken as enmattering the universal form by possessing its particular instantiation; in this sense, indeed, there can be talk of universal ontic principles. Hence Aristotle can conclude his exposition by stating (1087a23-24) that therefore there need not be any talk of a separate and subsistent entity, as far as such properties are concerned.

Ross's opposing (II, 466) the doctrine as expounded here to Aristotle's usual view seems beside the mark. Throughout his works Aristotle argues that it is the particular instantiation *in* the particular (being, it is true, *universally* applicable) which, under the aspect of its formal poly-applicability, is the proper object of true knowledge. Ross refers to two clear passages in Aristotle where this position comes to the fore. In *APo.* I 31, 87b28-29, the author claims that even sensation is of the universal *in* the particular, i.e. in so far as the latter is taken according to its being 'such-and-such' (τοιοῦνδε)<sup>108</sup>, not in its capacity of just being this particular (τόδε τι). Likewise, at *An.* II 12, 424a23-24, it is said that in every case of sensation sense is affected by that which possesses colour, or flavour, or sound, but this affection by such a thing is not taken according to the (substantive) name by which each such thing is brought up (calling it e.g. \*'the golden' <thing> or \*'the coloured' <thing>), but to its being of a certain kind (ἡ τοιονδί) and according to its (universally applicable) definiens (κατὰ τὸν λόγον).

### 11.56 *Can eternal things be composed of elementary parts?*

In the examination of the general question whether it is possible for eternal things (τὰ αἰδία) to be composed of elementary parts, it is

<sup>108</sup> This term refers not to a coincidental quality, such as being wise or pale, but to a thing's (whether essential or accidental) quiddity which causes it be of such-and-such a nature; e.g. at *Pol.* I 7, 1255b20-22: "The master is called a master [...] because he is of a certain kind (τῷ τοιονδ' εἶναι), and the same applies to the slave and the freeman". Compare the use of ποῖόν τι to characterize the δευτέρα οὐσία at *Cat.* 5, 3b15.

first argued (N2, 1088b14-28) that if this is the case they will contain (ἔξει)<sup>109</sup> matter, and that things containing material elements cannot be eternal, since what can fail to exist is not eternal; and so no eternal οὐσία can have elementary parts present in it.

The chief one among the many reasons why the Platonists are led astray is their old-fashioned way of putting the problem. They thought they had to prove (against Parmenides) that not merely Being Itself is, but also what is not *is* (τὸ μὴ ὄν ὅτι ἔστιν); for only in this way, i.e. from being and something else, would it be possible, they thought, for there to be a plurality of things (1088b35-1089a6).<sup>110</sup>

Next Aristotle goes on to show that the Platonists' misconceptions all go back to a categorial mistake, so to speak. First of all, 'what is' (τὸ ὄν) has many senses: sometimes it means subsistent entity (οὐσίαν); sometimes something in a qualitative or quantitative mode of being; and at other times obviously (δῆ) something according to another mode of categorial being (τὰς ἄλλας δὲ κατηγορίας). The issue is now addressed from the semantic point of view:

*Met.* N 2, 1089a9-19: So unless what-is-not will be, what kind of one will the things there are altogether be? Will it make up a totality of the subsistent beings, or of the attributive modes of being, and so on? Or will they all together be one, i.e. the 'this' and the 'such-and-such' and what is of such-and-such a magnitude or number (τὸ τόδε καὶ τὸ τοιόνδε καὶ τὸ τοσόνδε), and so on for the remaining modes of categorial being which signify some one mode of being?<sup>111</sup> But it is absurd, or rather impossible that the coming into play of one single kind of thing (μίαν φύσιν τινὰ γενομένην) should be responsible for the fact that of what *is*, one thing is a 'this', another a 'such-and-such' thing, another a 'so much', another a 'there-and-there' thing. Further, what kind of not-being *plus* being do the things there are come from? 'Not-being' too has many senses, because 'being' has: 'not being a man' means not being this type of subsistent being (τὸ μὴ εἶναι τοδί); 'not being straight' not being of this quality (τοιονδί); and 'not being three cubits long' not being of this size (τοσονδί). So from what kind of being *plus* not-being do the things there are come to be many?

*He* [Plato] means falsehood and that kind of thing by 'what is not', Aristotle continues, from which in combination with being things

<sup>109</sup> See my note 97, p. 346. Cf. ἔσεσθαι at 1089a2 and 6.

<sup>110</sup> Ross (*ad loc.*) may be right that Aristotle has Plato's *Sophist* in mind, e.g. 237A and 256E; De Rijk (1986), 82-92; 110-7; 164-82; 206-12; 302-5.

<sup>111</sup> Being signified by terms transgressing the borderlines between the categories are, qua coincidental unities, ruled out.

become many. That is why it used to be said that we are forced to start from something false ('inaccurate'), like geometers when they draw a line in the sand and assume it to be a foot long while it is not a foot long. But this is a misrepresentation. Geometers do not make false assumptions in their reasonings (1089a20-25). Cleary aptly refers<sup>112</sup> to the so-called 'ecthesis' of a Euclidean theorem. For instance, the geometer says "Let ABC be a right-angled triangle", and then seems to use this diagram to prove some attribute of ABC, although the diagram as it actually stands may not have been perfectly right-angled. However, it is the universal right-angled triangle — the formal instantiation of '2R-ness', that is — which is the geometer's proper object. Thus the proof's validity does not depend upon the correctness of the diagram drawn in the sand (which is bound to represent the universal right-angled triangle quite inadequately). And this means that for framing sound reasoning one does not need the assumption of any 'non-being' ('falsehood'). When claiming (1089a24-25) that geometers do not use false assumptions as conclusive starting-points, "for the figure (drawn in the sand) is extraneous to the reasoning", Aristotle means to say that it is not the figure as materialized in the sand or otherwise which serves as a logical assumption, but that which, however inadequately, is represented by it.<sup>113</sup>

In a similar vein, Aristotle rejects non-being taken as Platonic falsehood as contributing to the plurality of things. Rather, non-being should be taken in terms of 'potentiality', which is one of the many senses in which we may speak of 'non-being':<sup>114</sup>

*Met.* N 2, 1089a25-31: And it is not this kind of non-being from which the things-there-are come into being or pass away into. Since non-being in its different cases has as many senses as there are categorial modes of being, and in addition to these, it is used to stand for what is stated as false (τὸ ὡς ψεῦδος λέγεται μὴ ὄν), and also for what is potential, it is from this last that coming to be takes place. A man

<sup>112</sup> (1995), 387; cf. Ross II, 476.

<sup>113</sup> Cf. *APr.* I 41, 49b33-50a4, where it is likewise said that the geometer does not use the diagrams in the sense that he reasons from them. Similarly at *APo.* I 10, 76b39-77a3, Aristotle claims that the geometer does not draw any conclusion from the fact that the particular line of which he himself is speaking is such-and-such, but from what his diagrams disclose (τὰ διὰ τούτων δηλούμενα). I cannot see why Annas can speak (1979, 203) of the premiss as a 'postulate': "What the geometer is doing is to set up an initial postulate, and the proof is conditional on this, but does not itself assert the truth of the postulate". Cf. Plato, *Rep.* VI, 510D.

<sup>114</sup> Compare *Met.* E 4.

comes to be from what is not man but is potentially man, and pale comes to be from what is not pale but is potentially pale; and in a similar way whether it concerns one thing or a plurality of things.

In the subsequent lines (1089a31-1090a2) Aristotle proceeds to argue that the Platonists introduce the wrong principles of plurality because they take mathematical entities, such as numbers, planes, and bodies, as the subsistent entities that are multiplied by a principle, viz. the Infinite Dyad or the Great and Small, which, it should be well noticed, is clearly confined to one categorial mode of being, Quantity.<sup>115</sup>

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<sup>115</sup> Cleary (1995), 387-9. At *Met.* N 2, 1089b20-32, Aristotle discusses the issue of individual non-substantial instantiations in a polemic with Platonism.

## CHAPTER TWELVE

### THE UNITY OF ARISTOTLE'S THOUGHT: THE OTHER WORKS

#### 12. 1 *Status quaestionis*

It was not until about 25 years ago that, after a long period of neglect, the zoological treatises,<sup>1</sup> particularly *HA*, *PA*, and *GA* were taken into serious consideration to test theories and interpretations of basic tenets of Aristotelian thought. The scholarly opinions about the relationship between, say, Aristotle's logic and metaphysics on the one hand, and the works on natural philosophy and biology on the other, seem to be ultimately based on the interpreter's point of view regarding the idea of unity of Aristotelian thought. First and foremost this idea is rejected by the developmentalists, who assume different stages of doctrinal development in Aristotle, even including radical changes and inconsistencies.<sup>2</sup> Besides this, there are scholars, whether or not in the wake of the development movement, who see serious conflicts between the account of scientific explanation and inquiry described in the *Posterior Analytics* and practised in the *Metaphysics* and those carried out in the zoological treatises;<sup>3</sup> they ascribed the conflicts to the diversity of the author's disparate interests in the respective groups of works.<sup>4</sup> Still others, among whom some of the Greek commentators, tried to force a syllogistic structure upon texts occurring elsewhere in the *Corpus*.<sup>5</sup> Many others, especially to be found among

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<sup>1</sup> This label is here used loosely. Of course, one should refrain from using present-day categories for these works, classifying the *HA* as 'natural history', *PA* as 'comparative anatomy', and *GA* as 'embriology'. Not even the terms 'biological' or 'zoological' are found in Aristotle, who speaks of the general study of nature (ἡ φυσική), and within it, the study of plants, or of animals, and so on. All these works, and the *Physics*, as well as the *De Anima* and the ethical treatises, share the common characteristic of all of Aristotle's works: they are philosophy.

<sup>2</sup> My sections 1.11 and 1.12.

<sup>3</sup> Lloyd (1996, 7) aptly characterizes this problem as 'a hoary old chestnut'.

<sup>4</sup> E.g. Patzig (1979, 37) is of the opinion that Aristotle's writings were not written as attempts to reach the ideal of a deductive science as defined in the *Posterior Analytics*. For that matter, Patzig seems to share the usual over-estimation of the role of prioristic syllogistics in the doctrine of the *Posterior Analytics*. My section 2.75.

<sup>5</sup> For the inadequacy of such attempts see my sections 2.73-2.75.

those specializing on Aristotle's works on living nature, have energetically argued for the view that those works present rich material for testing our theories and interpretations of Aristotle's thought, and even that many a (supposedly) obscure or paradoxical point in his lore on matters of metaphysics, philosophy of science, and psychology can be cleared up by studying his zoological works.<sup>6</sup>

The initial position Barnes was holding<sup>7</sup> with reference to what he called "a classical problem in Aristotelian exegesis" was to the effect that ἀπόδειξις is not a method of research but only serves educational purposes: it offers a formal model not for acquiring knowledge, but for presenting and imparting knowledge already acquired (cf. Patzig 1979, 37). Thus our original problem reduces to the intriguing question why Aristotle should lay so much emphasis on a pedagogic-didactic method without paying any attention to what the pedagogic intentions are all about.<sup>8</sup> Later on, Barnes convincingly argued<sup>9</sup> (in the wake of Friedrich Solmsen) for the view that *Posterior Analytics* was initially innocent of syllogistics as formally elaborated in *Prior Analytics*, which was then grafted on to it after its discovery. Even so, this can hardly affect the issue of there being or not being substantial affinities between the lore of the *Posterior Analytics* and the scientific practice of the zoological treatises, since the prioristic syllogistics is by no means representative of Aristotle's epistemonik procedure.<sup>10</sup>

Three decades of lively ongoing debate have produced more than reasonable evidence for setting apart Aristotle's logic and metaphysics from his zoological works in matters of practical procedure. It would be a mistake, however, to read into them fundamentally disparate approaches on Aristotle's part, or quite a different strategy of argument, let alone contradictions or any radical doctrinal permutations. Confining myself to some of the chief publications on this score, Balme, Pellegrin, Gotthelf, and Lennox have convincingly shown both terminological (such as the use of the logico-

<sup>6</sup> Detel (1993, 263-90) presents a well-documented overview of leading interpretations of the purport of the *Posterior Analytics*.

<sup>7</sup> In *Phronesis* 14 (1969). For anticipation by others see Guthrie VI, 170, n.1, and Barnes's sketch (1981, 58f). Lloyd (1996, 7-37) offers a well-balanced discussion of the subject.

<sup>8</sup> For pertinent criticism of Barnes's solution to the problem see Guthrie VI, 170ff.; cf. Lennox (1987), 118.

<sup>9</sup> Cf. Lennox (1987), 118; Gotthelf (1987), 195.

<sup>10</sup> Lear (1980); my sections 2.72-2.76. Cf. Gotthelf (1987), 194-7, who rightly questions the idea that the syllogistic form should be explicit for there to be a 'demonstrative' argument.



metaphysical tools γένος and εἶδος etc.)<sup>11</sup> and doctrinal agreement and concordance.<sup>12</sup>

The array of different views held by different commentators is neither surprising nor in itself a matter of concern. But there is quite a lot of truth in Lloyd's complaint<sup>13</sup> that the current situation in some areas of the study of zoology borders on a state of interpretative anarchy. It seems to be *de rigueur* in this field, as he puts it, not just to revise opinions maintained some time ago, but to do so with regard to positions published no more than a couple of years back — even, at the limit, of positions in works as yet unpublished but forthcoming.<sup>14</sup> Flexibility, tentativeness, anti-dogmatism are all laudable qualities, he continues; but when, as so often in this area at the present time, we are faced with a bewildering variety of hypotheses, the urgent need is to spell out and explore their implications.<sup>15</sup>

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<sup>11</sup> Balme 1987a; 1987b; Pellegrin 1982; 1985; 1987; Gotthelf 1985a; 1987; Lennox 1987; 1990; 1991; cf. Boylan (1983), 50-9.

<sup>12</sup> Balme 1987c and 1990; Pellegrin 1982; 1985; 1987; Gotthelf 1985a; 1987a; Lennox 1985, 1987; 1990; 1991. Also Freeland (1990); Frede 1990; Cooper 1990. The various aspects of the discussions are critically assessed in Lloyd (1996), 8ff. Quite a different view is found in Boylan (1983), whose book is meant for readers who want to understand and evaluate Aristotle's philosophy of biology and his actual biological investigations. Boylan concentrates his theoretical discussion on what he calls the teleological explanation, incorporating the formal and final causes, and the mechanical explanation, covering material and efficient causes. They are developed under the broad concept of Necessity (87-139). Boylan deals (18-29) with the 'concordance problem' (Lloyd's 'hoary old chestnut') in terms of Aristotle's 'theory of critical empiricism', and in effect confines his attention to the significance of Aristotle as a philosopher of biology and as a biologist, at the expense of the question of whether Aristotle's philosophical and 'scientific' thought from the viewpoint of methodology is consistent.

<sup>13</sup> G.E.R. Lloyd (1990), 7; 9.

<sup>14</sup> Lloyd in particular has David Balme in mind, on questions of authenticity (at Balme 1987a, p. 16), and on teleology (at Balme in Gotthelf & Lennox 1987, 285, n 33, in his "Teleology and Necessity", *ibid.*, 275-90); also the different formulations used in different versions of Balme's influential contribution in Mansion (1961, 195-212: "Aristotle's use of differentiae in zoology"); see Lloyd (1990), 9, n. 4.

<sup>15</sup> I fully agree with Lloyd's criticism of Pellegrin's 'moriology' ("The μόρια constitute the cardinal level of Aristotelian biology", and it is to μόρια alone that the correct division of γένος-εἶδος can be applied), but consider his arguments against Balme's view of the *individual* immanent form as not to the point. Lloyd shares with the 'universalists' the common confusion of the logical and ontological domains (cf. Lennox's confounding of ontological 'form' with logical 'species' in 1985, 89). In point of fact, to Aristotle, the mind 'universalizes' the individual immanent forms (εἶδη), making them 'species', without implying that the logical 'universals' should *as such* be found in the real world, the decisive thing merely being that to state their similarity is considered by him to have what the Medievals called a 'fundamentum in re'. Note that no things are *as such* similar: our mind states their similarity by comparing them one with another. The only (but utterly

A similar critical attitude is required as far as some chief persuasions cherished by those specializing on the zoological works are concerned. A persistent idea is that we need the study of these works to clear up obscure or even (supposedly) paradoxical issues found in Aristotle's other works. This is overstating the value of the zoological works, and perhaps also betrays an inadequate competence in the field of logic and metaphysics on the part of these scholars,<sup>16</sup> and at most testifies to the laudable attempt to rehabilitate Aristotle as a natural historian.<sup>17</sup> In a similar vein, when they argue for his offering a genuine ἐπιστήμη of animals, full of ἀποδείξεις, the students of 'Aristotle the natural historian' too readily use labels such as 'axiomatic structure' for the theoretical underpinnings of these works.<sup>18</sup> One should be aware that *pace* Barnes<sup>19</sup> modern labels like this one are also entirely out of the question when it comes to characterizing the lore of the *Posterior Analytics*.

The initial reduction of 'the classical problem in Aristotelian exegesis' to the problem concerning the (supposed) doctrinal or terminological argumentative divergencies between the 'scientific works' and the *Posterior Analytics* unduly burdened the controversy by disregarding Aristotle's strategy of argument as expounded in the *Topics*, including e.g. epagogical arguments (ἐπακτικοὶ λόγοι). Just as posterioristic proof (basically resting on the *qua*-procedure) must not be identified with prioristic syllogistics, so to Aristotle, proof is of a larger scale than epistemonik proof.<sup>20</sup> Hence the ins and outs of Aristotle's strategy of exegesis and argument call for further examination.<sup>21</sup>

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basic) difference from, say, the Kantians is that to realists like Aristotle (and the Medievals), the mind states similarities, but is not *by itself* constitutive of them, because the logical move of stating the similarities is supposed to find support in the real individuals' being so-and-so. Now for the *logical* procedure of proof the aspects of universal applicability of the species suffice.

<sup>16</sup> Balme (1987a, 20), for instance, wrongly thinks that only in *HA* does the paradoxes of *Met. Z*, of the 'snub nose', and of the indefinable individual come to collapse. The semantic 'snub nose' issue, however, becomes perfectly clear in the context of the *Metaphysics*.

<sup>17</sup> See Balme's eloquent peroration (1987a, 20): "It may be that, if this picture of Aristotle is right, we lose a clumsy natural historian and a confused encyclopedist; but we gain a greater philosopher of living nature".

<sup>18</sup> E.g. Gotthelf & Lennox (1987), 66; 68; Gotthelf (1987a), 169; 179; 194.

<sup>19</sup> Barnes (1971), *Introd.*, XI; XVI; also in his *Aristotle* (Oxford 1982), 37-9.

<sup>20</sup> My sections 2.71-2.75 and 2.54-2.55; for elenctical argument see my section 7.6.

<sup>21</sup> The next section can happily draw on the bulk of special studies on the subject made in the last few decades.

12. 2 *The gamut of arguments used in the works on living nature*

In a well-known passage in the last chapter of *PA* I (5, 645a1-36), Aristotle recommends the study of plants and animals as an ἐπιστήμη that in certitude and in fullness has an advantage over the study of the heavens. It does not search things at random, but what is for something's sake (τὸ οὐ ἔνεκα), and thus offers an understanding of final causes. Moreover, it deals with the unity of matter and form in whole substances (τῆς ὅλης οὐσίας).<sup>22</sup>

In his study on first principles in *PA* (1987a), Gotthelf convincingly shows that such principles are at the basis of that work's complex explanatory structure. He particularly refers to the above-mentioned passage of I 5. The enterprise is introduced and characterized in the opening lines of I 1 as ἐπιστήμη (639a3); and although the mode of proof cannot be that used by the theoretical disciplines, it embraces a knowledge of causes that is not inferior to that obtained in the strictly theoretical disciplines (639b21-640a9, commented upon by Gotthelf (197f.)). He is quite right (194-7) in questioning the need of explicit syllogistic forms of argument, but fails to see that the proper device of epistemonik proof is the *qua*-procedure of *Posterior Analytics*.

Looking for the use of the basic epistemonik procedure in the so-called 'scientific works', and thus testing Aristotle's achievements in that field of research, is easily jeopardized by two misconceptions: (a) in that one fails to recognize the special nature of Aristotle's scientific inquiry as practised in the zoological works, viz. that of 'fact-finding' *par excellence*;<sup>23</sup> and (b) by taking the *qua*-procedure (of *APo.* I) in isolation from the extensive treatment (in *APo.* II) of defining the object under demonstration.<sup>24</sup>

Lloyd (1987, 53-5) aptly draws our attention to Aristotle's caution in his evaluations of all the secondary evidence drawn from the

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<sup>22</sup> Boylan (1983, 41-50) presents an assessment of this passage in the framework of what he calls (41) "the most important repository of methodological theory for Aristotle's biology". Cf. Lloyd (1996), 28-33.

<sup>23</sup> Lloyd (1987, 53) rightly makes mention of the way in which the data were collected: "It is abundantly clear from repeated references in the text that he and his helpers consulted hunters, fishermen, horse-rearers, pig-breeders, bee-keepers, eel-breeders, doctors, veterinary surgeons, midwives, and many others with specialized knowledge of animals. But a second major source of information is what he has read, ranging from Homer and other poets, through Ctesias and Herodotus to many of the Hippocratic authors".

<sup>24</sup> My sections 6.51-6.59.

diverse specialists, or literature.<sup>25</sup> The chief way in which different (popular or alternatively scholarly) views are evaluated by Aristotle is the use of 'indications' (τεκμήρια). At *APr.* II 27, 70b2-3 the very word τεκμήριον provides the characterization of the 'genuine middle' required for there to be a genuine proof (my section 2.76). No doubt, in the zoological works the word is used in a similar broad sense in which ἀπόδειξις and ἐπιστήμη are applied to proofs that are not strictly epistemonical (the same type of proofs is referred to in the passage from *PA I* quoted above);<sup>26</sup> but the 'indications' play a pivotal role in the strategy of argument found in the scientific treatises. In general, the influence of Aristotle's theoretical preoccupations and preconceptions on his observational work is unmistakable, not only apropos the questions he asked, but also the results he arrives at.<sup>27</sup> Lloyd (58) rightly emphasizes that as in the physical treatises, so too in his biology, Aristotle often constructs a general theory largely by extrapolation from a slight (and sometimes insufficiently secure) empirical foundation. That is where not only the topical character of his way of argument comes to the fore, but also, in a way, the basic intention of winning his case against the ancients.<sup>28</sup> This by no means justifies saying that on this topical level the arguments are those of what Bolton (1990, 188ff.) has labelled 'gymnastic dialectic', which is not concerned with the truth of either the premisses or the conclusions of arguments. Rather, the arguments are a form of serious

<sup>25</sup> Lloyd refers to *GA* III 5, 756a33; 756b3-8; *HA* I 15, 493b14-16; V 19, 552b15-17; VI 11, 566a6-8; 18, 573a13-14; 20, 574b16-17; 31, 579b2-4; 35, 580a19-22; VIII 12, 597a32-b1; IX 28, 606a8; *PA* III 10, 673a10-31. Cf. Lloyd (1979), 200-25.

<sup>26</sup> Compare its use in rhetoric; *Rhet.* I 2, 1357b4-7; 3, 1359a7; II 25, 1402b14-1403a16. Lloyd (1996, 8-35) has a pertinent discussion of the 'topic of demonstration' throughout the *Corpus*, and makes it clear that we have every reason to be wary of talking of *the* theory and *the* practice of demonstration, as if there were just the one of each. Unfortunately enough, Lloyd fails, as do others as well, to put the syllogism (of whatever type or stringency) in the right perspective of merely being the (highly artificial) formal pattern expanding the common 'proof by *qua*-propositions' (my section 2.75). Incidentally, the common rendering 'proof' is inappropriate, τεκμήρια being of an instrumental nature, just as 'middles' are.

<sup>27</sup> Lloyd (1987), 56.

<sup>28</sup> In a similar flavour of competitiveness, I take it, one should put Aristotle's remarkable frame of mind as a researcher (observed by Lloyd 1987, 62) which comes about where Aristotle speaks (e.g. at *Resp.* 1, 470b8-9) about other writers' inexperience of internal anatomy, or charges (as in *GA* II 8, 747b5-6; 748a8-9; IV1, 765b4-5) them with neglecting obvious evidence, or (as in *PA* IV 2, 676b33ff.; *GA* III 5, 756a2ff.; 6, 756b16ff; V8, 788b9-20) jumping to conclusions on inadequate evidence, or (as in *GA* IV1, 765a25-29) merely speculating on the result of a test, without actually executing it. In fact, similar criticisms could, on occasion, be made of Aristotle himself.

dialectic — among which so-called ‘peirastic logic’, which *is* concerned with truth.<sup>29</sup>

Take, for instance, the way in which at GA I 17-18 the four ‘indications’ for the so-called pangenesis view that the semen (τὸ σπέρμα) comes from each and every part of the body (721b13-722a1) are balanced against those supporting the opposite view (722a1-726a25).<sup>30</sup> Part of the counter-balancing argument is the statement “that the starting point (ἀρχή) of this investigation too is to understand what semen is, for then it will be easier to inquire into its specific functions (τῶν ἔργων) and the phenomena connected with it” (724a14-17). To this end, a nominal definition is put forward: “The ambition of semen is to be of such a nature that from it as their origin come into being those things which are naturally formed, not in the sense that there is any agent which makes them from it, such as man; <this is not the case>; for <offspring> proceeds from it simply because it is semen” (724a17-20). Next, the type of causality is established more precisely by scrutinizing (724a20-b19) the different senses of the phrase ‘anything proceeds from something else’. This results in the statement (724b14-19) that “semen is that which has in it the primary features (τὰς ἀρχάς) of the *two* copulating partners, being the primary mixture arising from the union of male and female, be it a foetus or an ovum; for these already have in them that which proceeds from both”.

Once again, the question what the primary nature of semen is must be taken up (724b21ff.). An extensive discussion about the differences between ‘waste-product’ (σύντηγμα) and secretion or excretion (περίττωμα) results in the rejection of the opinion of the ancients (e.g. Hippocrates) that semen is a waste-product. The resulting phenomena (τὰ συμβαίνοντα) are evidence that semen is secretion (725b4ff.). The conclusion can be drawn from the foregoing discussion (726a26-27) that semen is a secretion of useful nutriment, and this in its last stage (τροφῆς καὶ τῆς ἐσχάτης). In the next chapter (I 19) the differences between male and female semen are examined, which leads to the conclusion (727b31-33) that the female contributes the material for generation, and that this is in the structure

<sup>29</sup> *Top.* VIII. For one I do not agree with Bolton’s opposing (199ff.; 234ff.) peirastic arguments to ordinary dialectical arguments in terms of their different amounts of plausibility or truthworthiness.

<sup>30</sup> For criticism of details of Aristotle’s arguments see Lloyd (1987), 59-62, and also the comments in Bolton (1987), 155-64.

(σύστασις) of the catamenia, and that they are a secretion, their seminal character consisting in their containing the element the female contributes to generation.

Chapter 20 then goes on to qualify this conclusion, and comes to the statement (729a20-22) that, properly speaking, the female does not contribute semen to generation, but does contribute something, to wit the structure (σύστασις) of the catamenia. This conclusion, Aristotle remarks (a23-24), is not only gathered from what has been said, but also from examining things from the universal point of view (κατὰ τὸν λόγον καθόλου σκοπούμενοι).<sup>31</sup> The theoretical argument is based on the formal distinction between 'that which generates' and 'that from which is generated' (τὸ γεννῶν καὶ ἐξ οὗ), both being indispensable (a23-24). But even if they form something one, they must differ specifically (τῷ γε εἶδει διαφέρειν) — by the fact, that is, that their quiddity is distinct (καὶ τῷ τὸν λόγον αὐτῶν εἶναι ἕτερον). And in those animals that have these powers separate in two sexes (like human beings) the body and nature of the active and the passive must also differ. In the final conclusion, the semantic *qua*-procedure is applied in order to clarify the proper difference between the male and the female seminal contributions to generation, and by the same token that between male and female semen:

GA I 20, 729a28-33: Given, then, that the male (τὸ ἄρρεν) is taken for the effective and active, and the female *qua* female (τὸ θῆλυ ἢ θῆλυ) for the passive, it follows that what the female will contribute to the male's engendering material (τοῦ ἄρρενος γονὴν) is not engendering material but matter (οὐ γονὴν ἀλλ' ὕλην). This also appears to tally with <our observations>; for the catamenia have in their nature an affinity to primary matter (κατὰ γὰρ τὴν πρώτην ὕλην ἐστίν).

Finally in chapter 21, the question is addressed how it is that the male contributes to generation and how the semen coming from the male is the cause of offspring. This time, the author begins with once again considering the questions on general grounds (κατὰ τὸν λόγον). The male and the female are taken as such (ἢ ἄρρεν and ἢ θῆλυ), and brought under the generic categories of 'active' and 'passive', in order to support the statement that the active agent does not exist in that which is produced (729b9-21). Next, this *a priori* argument is

<sup>31</sup> For a general view of the formal aspects of Aristotle's strategy of argument see Lennox (1987), 100-19. Bolton (1987, 151-66) also deals with them, with a particular interest in Aristotle's use of definition. The role of the 'universal point' in the inductive procedure is dealt with in my section 2.56.

underscored by observations of how (some) males function in copulation (729b21-730a23). Now the general statement can be made (730a24-28): “From what has been said it is plain that the semen does not come from the whole of the male’s body in those animals which emit it, and that the contribution of the female to the generative product is not the same as that of the male: the male contributes the principle of the development (ἀρχὴν κινήσεως) and the female the material basis (τὴν ὕλην)”.

This treatment of ‘scientific’ problems testifies to Aristotle’s general strategy of argument when such matters are under examination. Facts are collected from diverse sources, and critically evaluated. The array of topical arguments — whose great number will not surprise us in these contexts — is interspersed by formal analyses whenever the matter allows it; formal analyses, indeed, akin to those found in strictly epistemononic ambiances. Thus topical and strictly formal (or more formal) approaches to the matters under investigation in the ‘scientific’ works go hand in hand with one another, the choice for one or the other depending on the subject under investigation.<sup>32</sup> To choose your arguments in accordance with the nature of the object in question is also recommended elsewhere in the *Corpus*. At *EN* I 3, 1094b11-13 it is said that the same exactness must not be expected in every argument; it suffices that the treatment achieves that amount of precision that fits its subject matter. When he deals with the appropriate way of teaching in *Met.* α 3, Aristotle exposes wrong expectations on this score, for instance with those who require exactness in everything; mathematical accuracy is not to be required of each and every argument, but only in immaterial things (995a6-16). In the programmatic chapter, *Top.* I 2, where it is explained for what purposes

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<sup>32</sup> Much of the critical discussions of Bolton’s views in Devereux (1990) and Brunschwig (1990) could have been less tentative if Aristotelian dialectics were more liberally taken as hospitable to any kind of argument that, although short of being strictly epistemononic, can support one’s position, without being overtly sophistical. On this assumption, *pace* Devereux (286), there is no conflict between Aristotle’s sayings about dialectic throughout his works and his programmatic claims at *Top.* I 2, 101a36-b4 of the usefulness of dialectic for obtaining (pieces of) knowledge up to philosophic standards (τὰς κατὰ φιλοσοφίαν ἐπιστήμας) and research of each discipline’s basic tenets (τὰ πρῶτα): it enables us to raise difficulties on both sides and thus more easily discern both truth and falsehood on every issue, and to proceed in matters of the principles peculiar to the discipline in question as well. Accordingly, there is no need at all to raise doubts (with Devereux) about whether Aristotle’s claim at *Top.* I 2, 101a36ff. reflects his mature view of the relationship between dialectic and philosophy.

dialectic in general is useful, its use for recognizing the first principles of *each* discipline is even called the most appropriate task of dialectic (101a36-101b4).<sup>33</sup> As we will see in the next section, the study of the nature of material, changing things (ἡ φυσική) too proceeds from appropriate premisses built upon principles that hold for physical things as such. Appropriateness of principles should by no means discard dialectical devices nor common things of a lower rank than the purely metaphysical or mathematical.<sup>34</sup>

Two final remarks should be made on the role of focalization and categorization in Aristotle's works on living nature. The recent studies on the issue of establishing appropriate differentiae in these works have thrown much light on the role of bringing appropriate properties of living beings into focus and adequately naming them.<sup>35</sup> More than once, you have to resort to neologisms in order to get the γένος precisely matching the special feature under examination into focus. Thus at *HA* IX 40, 623b5ff., the anonymous genus of all the nine varieties of insects that construct a honeycomb is focussed on, including those which are not bees but resemble them in shape; next they are dealt with in terms of the property of constructing such a comb. At *HA* I 5, 490a12-13, there is talk of creatures with feathered wings which are classed as 'birds' alongside other feathered creatures that do not have a separate name, including 'leathern-winged and 'membrane-winged'. Likewise at *HA* I 3, 489a17-19, it is stated that there is no special name for the organ in which the only sense that is common to all animals has its seat.<sup>36</sup> This aspect of Aristotelian research, including the anonymity topic should be assessed in terms of what Aristotle teaches in *APo.* II 13-14 about how division can aid the systematic grasp of the appropriate genus.<sup>37</sup>

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<sup>33</sup> The exposition of the nature of dialectical problems and dialectical theses found at *Top.* I 11 (104b1-105a9) very well fits Aristotelian research as practised in treatises as the *Physics*; Algra (1995), 159, n. 92. See also Nussbaum's comments (1982, 267-75) on Aristotle's own observations on his philosophical method at *EN* VII 1, 1145b2-7.

<sup>34</sup> *Top.* I 1, 100a30ff.; VIII 1, 155b3-14; 14, 164b19; *SE* 11, 171b6-7; b35ff. (dialectical argument contrasted with contentious argument); 172a21-b1 (peirastic dialectic, particularly with a view of the use of common principles). It is pertinent to be aware of what Lloyd (1979, 115-25) rightly considers the "interactions of dialectic and demonstration".

<sup>35</sup> Pellegrin 1982, 1987 and 1990; Balme 1987b; Lennox 1987; Charles 1990.

<sup>36</sup> For a similar position of ἀνώνυμα in other works see my section 2.72.

<sup>37</sup> At *APo.* II 13, 96b7-8, Aristotle speaks of "a kind of genus (γένος τι), either with or without a name of its own"; cf. *ibid.*, I 6, 74b8 and 21.



Another point worth noting is that in making divisions Aristotle is not doing taxonomy, creating like a Linnaeus *avant la date* a fixed terminology of orders, families, and so on. The purpose of his classifying work is closely related to the research at hand, and simply serves to bring relevant features into focus.<sup>38</sup> And that is precisely what focalization and categorization are all about.<sup>39</sup>

### 12.3 *The works on natural philosophy*

In *Incess. an.* I 2, 704b12ff., Aristotle lists the requirements for genuine physical inquiry, including that of living nature. First we must establish the method appropriate to every inquiry of the kind. This method endorses the following rules of thumb: (a) Nature creates nothing without a purpose ('in vain', μάτην), but always, in each kind of living nature, the best possible with regard to its essential constitution (τῇ οὐσίᾳ), and so if one way is better than another *that* is the way of Nature; (b) as far as change is concerned, there are three pairs of dimensions (διαστάσεις) inherent in various things, viz. up, down, before and behind, and to the right and to the left; (c) in addition, we must assume that the source of one of the basic kinds of change, locomotion, is pushing and pulling.

Appropriateness is indeed a key concept. Although 'logical' arguments do as such fit the requirement of focussing on essential constitution,<sup>40</sup> they are bad if they consider essential features not appropriate to the subject at hand, but to some other, e.g. its superior (genus) or inferior (sub-species).<sup>41</sup>

Confining ourselves to Aristotle's general methodology as expounded in *Phys.* I, 1-2, as in all other disciplines, the first thing to do is to grasp the first principles and causes of things. This amounts to looking for the universal element in the particulars, since in this fashion we obtain their essential constitution. That is why we should

<sup>38</sup> See esp. the studies by Pellegrin (1982; 1987; 1990; also Gotthelf & Lennox (1987), *s.v.* 'taxonomy', and my section 2.41. Ignoring the fact that Aristotle's classifications of animals are incidental and discussion-bound, Boylan (1983, 59-67) undertakes to evaluate their taxonomical significance.

<sup>39</sup> E.g. in the argument at *PA* I 1, 640a33-b1, where the phrase τὸ ἀνθρώπῳ εἶναι functions as a *qua*-device, as elsewhere the notions οὐσία or γένος do. See Gotthelf (1985), 28-45; Gotthelf (1987a) and (1987b) *passim*, and Lennox (1987a) *passim*. Compare *Met.* Z 9, 1034a30-32. Also Ebert (1977), 130-2.

<sup>40</sup> See Charlton's introduction in (1970), X.

<sup>41</sup> Compare Aristotle's procedure at *Cal.* 7, 7a25-b7; my section 13.3.

proceed from the universal headings to the particular (ἐκ τῶν καθόλου ἐπὶ τὰ καθ' ἕκαστα). Undifferentiated universal headings are more accessible by sense-perception. Thus the recognition of a thing's proper features will escape our attention as long as we name objects by too wide a name. The latter should be replaced by the thing's proper definiens. That is how little children come to discriminate their parents, by learning to properly define the names, 'dad' and 'mum', and then see that they no longer apply to people who are only entitled to the wider, undifferentiated names, 'man' and 'woman'. Likewise, Aristotle intends to say, when it comes to genuine physical inquiry, it will not do to categorize the object by one of its generic names, since such names fail to focus on the feature that precisely determines its essential constitution (184a10-b4).

In chapter 2, 185a20ff., the object's mode of being is established by differentiating its widest appellation 'that which is' (τὸ ὄν). Only subsistent beings can exist separately, on their own; everything else is said of subsistent being as its substrate (πάντα γὰρ καθ' ὑποκειμένου λέγεται τῆς οὐσίας). The chapter ends (185b25-186a3) with the famous 'one thing-one name' problem: does bringing up things by different names make them many? Aristotle's answer will not come as a surprise: you have to distinguish between 'formally one' (or: 'one in definiens') and 'referentially one'. The same thing indeed can be pale and educated (so that the pale and the educated are one and the same thing), but being pale and being educated are formally ('quidditatively') different and, accordingly, not one and the same thing.

Two things can be gathered from the foregoing: (1) whenever the subject matter does not allow us to proceed in the manner required in epistemonical procedures, we are entitled to frame arguments in accordance with the dialectical setting; and (2) sound reasoning always requires efficacious focalization and appropriate categorization. It is particularly the latter feature that comes to the fore in *APr.* I 30, where Aristotle, dealing with how to frame syllogisms, explains the choice of appropriate syllogistic terms in the framework of appropriate focalization and categorization, and recommends 'diagram'-ming the appellations having the accurate extension according to truth:

*APr.* I 30, 46a3-10: The route <to be followed in framing deductions> is the same with respect to all kinds of things, whether it concerns philosophy or any kind of art or study whatsoever. For one must

discern on account of each particular case the things that fall to it and to what other things it itself falls, and be provided with as many of them as possible. And one must examine these things using the three syllogistic terms, refuting in this way and stating in the other way: in the pursuit of truth (κατὰ μὲν ἀλήθειαν) one should proceed from premisses arranged according to what truly (κατ' ἀλήθειαν) falls to the objects, whereas in dialectical discussions one proceeds from premisses based on opinion (κατὰ δόξαν).

So much for the dialectical procedure as such. What to say about the nature of the material from which the investigations start? In the last sentence just quoted, the author already makes it plain that dialectical premisses are based on what is held to be true 'according to opinion'. In the well-known passage that follows (46a17-22), Aristotle proceeds to elaborate this feature, claiming that it is up to our experiences concerning each subject to provide the starting points peculiar to the discipline it is subjected to; for instance, astronomical experience should provide the starting points most appropriate to an astronomical subject, and the same goes for any other art or discipline. In my opinion, the passage should be taken more broadly than is commonly understood. In the context of *APr.* I 27-30, which presents a general account of how to find proofs on whatever subject, the scope is primarily of particular cases we may come across — hence the general approach of the matter at I 27, 43a25ff., starting from an elementary division of 'things-there-are' (τὰ ὄντα), and what we may assign to them (our section 6.11) — rather than on a division of disciplines as such.<sup>42</sup> Thus it is experience that provides us with the data about any subject (46a23: τὰ ὑπάρχοντα περὶ ἕκαστον). These data, also called φαινόμενα, constitute a 'collection of facts' (ἱστορία) concerning the subject under examination, and may be quite diverse.<sup>43</sup>

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<sup>42</sup> Smith (1989), 159: "Aristotle thus stresses, not just that experience provides us with knowledge of the principles of sciences, but that experience *of the relevant subject matter* (his italics) provides us with the principles concerning that subject matter". Note that this is precisely at the basis of the *qua*-procedure.

<sup>43</sup> The eager discussions provoked by Owen's influential paper (1961) on Aristotle's dialectical method have resulted (with his critics as well) in rather sophisticated distinctions between kinds of φαινόμενα or ἔνδοξα which must not be imposed on Aristotle. The whole of these discussions, including the initial position in Owen (1961) is aptly assessed in Algra (1995), 153-70. What he observes (167, n. 110) concerning Aristotle's dialectical procedure in the *Physics* to the effect that it is a kind of *dialectica utens* rather than *docens* seems to apply to other parts of the *Corpus* as well.

Two issues in particular are suitable for demonstrating the ins and outs of Aristotle's inquisitorial practice: the problems of Time and Prime Matter.

## 12. 31 *The discussions concerning Time in Phys. IV*

One preliminary thing about time that should come into consideration, Aristotle announces (IV 10, 217b29-32), is the question of its ontological status.<sup>44</sup> The way to go about this inquiry is to review, among others, the non-technical arguments (ἐξωτερικοὶ λόγοι). That time either is not at all or scarcely and dimly (μόλις καὶ ἀμυδρῶς) may be gathered from a number of considerations, substantially boiling down to the following: (a) time is made up of past time and future time, neither of which exists; (b) there can be no present part of time, because whatever the present is, it is not a part of time (217b33-218a8); (c) the status of the 'now', which appears to be the boundary between past and future, is not clear either: does it remain always one and the same, or is it different from time to time? (218a8-30). The issue of the reality of time is dealt with dialectically, and the arguments are correspondingly debatable.<sup>45</sup> However, they do make a point: time is not something devoid of any reality, it is true, but it merely possesses diminished existence, quite unlike trees and stones.

This vague conclusion about the reality of time is all Aristotle needs for now. As a matter of fact, it is a nice prelude to his next statement (218a30-33) that time's nature is equally unclear: this may appear from the opinions of previous thinkers, which all turn out to be unsatisfactory (218a33-b9).<sup>46</sup> One point, however, is worth closer examination, time's close relationship to change: "But since time is above all thought to be movement and a kind of change,<sup>47</sup> this is

<sup>44</sup> These problems (as indeed the whole of chs. 10 and 11) are substantially commented upon in Hussey (1983), 138-59. Hussey's translation is for the greater part accurate and lucid.

<sup>45</sup> Hussey, 138-41. For the stating of problems by Aristotle just to introduce his own views as part of his strategy of argument see e.g. *Met. B*; *Phys. IV* 1, 209a2-29. An interesting discussion of the historical problems surrounding the 'reality of time' issue is found in Sorabji (1983), 7-63.

<sup>46</sup> Once again, Aristotle's dialectical approach comes to the fore. See *Top.* I 13-14 where the collection and exposition of the opinions of previous thinkers about the issue to hand turns out to be an important part of the dialectical method.

<sup>47</sup> The distinction between 'change' (μεταβολή) and 'movement' (κίνησις) is not very important in *Phys.* III and IV; cf. Hussey, 55. See also Aristotle's explicit remark at 218b19-20. The 'Does time Require Change' question in its historic perspective is discussed in Sorabji (1983), 67-83.

what must be examined" (218b9-10). And this is precisely what Aristotle has in mind in the remaining part of the discussion in these chapters.

Aristotle's manner of expression is, as so often, remarkably elliptical. Just like on other occasions where he develops his own view on the matter to hand, Aristotle likes to use nouns pregnantly, making use of their semantic ambivalence: nouns often refer to their significate as enmattered in a particular, and thus 'time' and 'change' are here used to stand for something *involved in* temporal conditions, and something *involved in* change, respectively.<sup>48</sup> The next few sentences (218b10-18) embrace this idea ("alteration and change of anything are only found in concrete particulars"). So we are in fact entitled to call time 'a kind of change' (b9-10: μεταβολή τις). However, Aristotle points out some unmistakable differences: change is localized in the changing particular, whereas time is equally everywhere and with everything; moreover, changes may be faster and slower — time is not. It will be plain that in pointing out such differences, a shift has occurred in Aristotle's attention from this or that actually changing and time-bound particular to 'change' and 'time' as features generally occurring in the world of particulars. Anyway, time as a phenomenon cannot be the same as change.

In the next chapter Aristotle proceeds to tackle the problem how time and change are connected. He begins by taking up the close relationship between them — which was established so confidently at 218b9-10 — from a fresh point of view: our awareness of temporality (διάνοια). That there is no time apart from change and alteration is gathered from the unmistakable fact that when we do not mark off any alteration, and our state of mind seems to remain the same, it happens that we do not think that any time has elapsed;<sup>49</sup> whereas when we do perceive and mark it off, then we speak of a lapse of time

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<sup>48</sup> My semantic Main Rule of 'double entendre' (RSC); see my section 1.71. The ambivalence roots in the chief tenet of Aristotle's anti-Platonism: "no εἶδος but enmattered in particulars, and, therefore, forms and the things informed extensionally coincide". Compare 218b10-12 to *Met. α* 2, 994b25-26: "Even matter has to be conceived of as involved in a changing [=material] thing (ἀλλὰ καὶ τὴν ὕλην ἐν κινουμένῳ νοεῖν ἀνάγκη)". Compare Ammonius CAG IV-6, p. 69<sup>12-14</sup>: [...] οὐχ ὅτι ὁ τόπος λέγεται ποῦ, ἀλλὰ τὰ πράγματα τὰ ἐν τόπῳ ὄντα, ὥσπερ οὐδὲ ὁ χρόνος αὐτὸς ποτὲ, ἀλλὰ τὰ ἐν χρόνῳ γινόμενα πράγματα.

<sup>49</sup> Since to Aristotle, sleep implies a suspension of the activity of the 'sensus communis'. In *Somno* 2, 455a4-b13, Aristotle refers to the myth of the Sardinian Sleepers. There is an interesting discussion of this myth in Cavagnaro-Stuijt (1995), 292-300.

(218b21-33). This fact opens up a new perspective on the structure of the semantic scope of the concept of time. Retaining the two findings of the previous chapter to the effect that time is not simply identical to change, but is not independent of change either (219a1-10), we must reconsider the nature of time, that is to say, we have to establish what aspect of change time is — this time in terms of *our perception* of Change and Time.<sup>50</sup>

At 219a10-33, and subsequently, Aristotle unfolds what Hussey (91) calls “a ‘grand design’ in which all metrical and topological properties of time-intervals are to be defined in terms of, and shown to be dependent on the corresponding properties of changes, and these in turn are to be similarly derived from those of magnitudes”. As for the two pairs ‘magnitude-change’ and ‘change-time’ it is claimed<sup>51</sup> that (a) there are relationships of priority (ontological and/or logical and/or epistemological) in virtue of which the second member of each pair is in some sense dependent upon the first; and (b) as a result of this dependence, the second member of each pair has an internal structure analogous to that of the first, and derives from it. These claims together constitute Aristotle’s ‘grand design’ in his discussion of time, in which his principal aim is to exhibit its structure and properties as perfectly intelligible in terms of the structure and properties of spatially extended magnitudes and their changes.

These close relationships are expressed by the notion of ‘following’ (ἀκολουθεῖν). What follows and is followed is not magnitude, change, and time, but their properties of being continuous and having a before-and-after (219a10-25). What makes these structural and logico-epistemological sequences somewhat complex is the fact that both properties, the continuity and particularly the ‘before-and-after’ of change and time, have everything to do with their being perceived.

The property of ‘before-and-after’ (τὸ πρότερον καὶ ὕστερον) will play the key role in the subsequent discussion, which will lead to Aristotle’s remarkable definition of time at 219b1-2, and 220a24-26. Other occurrences of the phrase<sup>52</sup> show that it was already used as a

<sup>50</sup> The perception of Change and Time, which is here only stated dialectically, is developed in *An.* II 6; III 1, 424a14-b11; *Sens.* 1, 437a3-9; *Mem.* 1, 449b24-450a25 and 2, 452b7-453a4.

<sup>51</sup> Hussey, 142, with his extensive comments, 143-50.

<sup>52</sup> *Phys.* VIII 1, 251b10-11 and 7, 261a14; *Cael.* II 4, 286b16; *GA* II 6, 742a21; *Met.* A 8, 989a16; B 3, 999a6; Δ 11, 1019a2; Θ 8, 1050a5; M 2, 1077a19, 27; 6, 1080a15ff.

technical term in the Academy, and, what will turn out to be of major importance for our understanding of Aristotle's definition of time, it denoted something that could be present *only in an ordered series*. From the semantic point of view, Aristotle's wording (219a19-21) should be paid special attention to: "The before-and-after in change is what being at a certain time ( $\delta\acute{\alpha}\ \mu\acute{\epsilon}\nu\ \pi\omicron\tau\epsilon\ \delta\acute{\upsilon}\nu$ ), change [i.e. the changing thing, taking the noun's significate *in concreto*] is,<sup>53</sup> but the before and after taken in its own being ( $\tau\acute{o}\ \epsilon\acute{\iota}\nu\alpha\iota\ \alpha\upsilon\tau\acute{\omega}$ ) is something different and is not the same as change".<sup>54</sup> What Aristotle is trying to say is this. Ultimately, the before-and-after *is* found in change (and the changing thing in its successive stages), and thus, as it were, coincides (extensionally or referentially, that is) with change. Even so, it is not the same as change, so that, although change and time have the property of 'before-and-after' in common and extensionally coincide, they cannot be put on a par, formally speaking.

From 219a22 onwards, a first, operational definition of time is prepared for by working out the 'before-and-after' property time shares with change; once again it is consciousness, i.e. the perception of the before-and-after that is the constitutive link:

*Phys.* IV 11, 219a22-30: For sure ( $\acute{\alpha}\lambda\lambda\acute{\alpha}\ \mu\eta\nu$ ), we become acquainted with time, too only when we mark off change, marking it off by the before-and-after, and we speak of a lapse of time only when we have perceived the before-and-after in change. We mark off change by taking them [the before and the after, including<sup>55</sup> the object in its

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(cf. Annas, 1979, 163) and 1080b12; *EN* I 6, 1096a18.

<sup>53</sup> Meaning: "The before-and-after in change is the changing thing in its capacity of being present at certain (successive) instants". I cannot follow Hussey's rendering (44; 148) "in respect of what makes it what it is, change". Hussey seems to erroneously take the technical phrase  $\delta\acute{\alpha}\ \pi\omicron\tau\epsilon\ \delta\acute{\upsilon}\nu$  to be an equivalent of  $\delta\acute{\omega}\pi\epsilon\rho\ \delta\acute{\upsilon}\nu$ . For Aristotle's use of this technical tool see my section 12.32. Note that as in other occurrences of the phrase, the relative pronoun  $\delta\acute{\alpha}$  is predicate to the participle  $\delta\acute{\upsilon}\nu$ , rather than subject to  $\acute{\epsilon}\sigma\tau\acute{\iota}\nu$ . Thus in effect what is referred to by the pronoun implements the empty container 'being'. The pronoun is correctly taken as a predicate noun by Bragues (1982, 98-144), who presents an excellent analysis of the Aristotelian formula  $\delta\acute{\alpha}\ \pi\omicron\tau\epsilon\ \delta\acute{\upsilon}\nu$ . He rightly retains  $\acute{\epsilon}\sigma\tau\acute{\iota}\nu$  at 219a21 (which was cancelled by Ross and Cavagnaro, following Torstrik) and renders (131; cf. 102) 219a19-21: "L'antéro-postérieur est dans le mouvement ce qu'étant à un moment donné celui-ci (le mouvement) est mouvement".

<sup>54</sup> Incidentally, here and at some other places, Ross (who cancelled  $\acute{\epsilon}\sigma\tau\acute{\iota}\nu$  at a21) fell victim to Torstrik's disastrous interferences with Aristotle's text. As for the cancelling (at 219a21) of  $\acute{\epsilon}\sigma\tau\acute{\iota}\nu$ , which is found in all our MSS, I cannot see how from the viewpoint of paleography, the followers of Torstrik can explain the putative suppletion of this verb by a copyist. Ironically enough, this copyist must have taken the  $\delta\acute{\alpha}\ \pi\omicron\tau\epsilon\ \delta\acute{\upsilon}\nu$  construction as Bragues correctly does.

<sup>55</sup> According, that is, to the RSC Rule (section 1.71).

successive stages] to be different things, and something in between different from either; for whenever we conceive of the extremes as different from what is in between, and the soul says that the nows are two, one before and one after, then this phenomenon too we call 'time'; I mean to say (γάρ), what is marked off by the now is thought to be time; let this be established.

If such an awareness is missing there will be no change, and, accordingly, no time either, while if there is perception of the before and after, then we speak of time (219a30-b1). These statements (219a22-25 and a30-b1) lead to the definitive<sup>56</sup> definition of time: "This indeed is what time is: 'arithmos' of change in respect of the before-and-after" (219b1-2).

## 12. 32 Aristotle's definition of χρόνος. Its elliptic semantic area

The upshot of the previous discussions is that (a) time has everything to do with change; but (b) is definitely not the same thing as change; and (c) the difference between these two largely rests on consciousness (διάνοια): when we are aware of the before and after of (the successive stages of) change, and understand them in terms of different nows, then there is an awareness of time. These features, including their association *and* diversity, return in Aristotle's definition of time and its explanation, and in the subsequent discussions in chs. 12-14 as well.

The definition of time is, not surprisingly with Aristotle, somewhat obscured by his elliptical manner of speaking. For sure, the common rendering of ἀριθμός by 'number' is awkward and makes the definition even less accessible. First and foremost, Greek ἀριθμός (like Latin 'numerus', at that) usually implies plurality<sup>57</sup> (so that, properly

<sup>56</sup> Cf. 220a24-26. Hussey suspects (150; 152) that the definition as presented at 219b1-2 was inserted by someone who thought it was the official definition and ought to be present in this section. I rather regard this sentence as offering (in the way of a clarion call) Aristotle's personal view, right at the start of the remaining part of the chapter. It has been sufficiently prepared for by the previous paragraph.

<sup>57</sup> See e.g. *Phys.* IV 12, 220a27; *Met.* Δ 15, 1021a12-13; 6, 1016b17-18; Z 13, 1039a12-14; I 6, 1057a3-5; N 1, 1087b33-34; *Lin. insec.* 969a15-16; *An.* III 1, 425a19, where it is said that 'number' is perceived by noting the absence of continuity. Cf. *APo.* II 1, 89b25f.: εἰς ἀριθμὸν θέντες = 'putting it in a more-than-one-word expression'; my section 6.51. A similar use of ἀριθμητός is found at *Phys.* I 7, 190b25, where ὅλη ἀριθμητή means 'matter taken in its two successive shapes' — cf. the phrase λεγόμενον ἀμφοτέρως, used at *GC* I 3, 317b17-18 of the 'that out of which' taken in its capacity of actually being [x] *and* potentially [y] — rather than 'matter that is counted' (*Oxford Translation*), or 'countable matter' (Bemelmans), let alone 'measurable matter' (Charlton *ad loc.*).



speaking, our ‘number’ ‘1’ is not an ἀριθμός or ‘numerus’, but the principle of counting), and thus primarily connotes an ordered series of two, or more, elements that are somehow alike and therefore ‘countable’.<sup>58</sup> As in verbs such as ἀραρίσκω and ἀρέσκω and nouns like ἀρετή and ἄριστος, the root ‘αρ-’ in ἀριθμός means ‘fitting’; hence, ἀριθμός is something like ‘what can be put in an ordered series of alike elements’.<sup>59</sup> The use of ἀριθμός in the definition of time refers to the series of similar — and therefore countable — nows (219b10-11) appertaining to our perception of change.

When reading Aristotle, the three aforesaid connotations should be carefully recognized. At the same time they should be well marked off, to prevent us from taking change and time for the same thing. Hence the *qua*-locution is used to qualify their coincidence: “So time is change *only in-so-far as* (ἀλλ’ ἦ) change contains a series <of stages perceived as nows>“ (219b2-3). Aristotle goes on to clarify what he means by an indication (σημεῖον), but is compelled to likewise qualify the suggested equation of time with ἀριθμός, this time by opposing two ways in which the word can be used. Note that Aristotle’s use of the words ἀριθμός and χρόνος in this connection is the same as in ordinary language:

*Phys.* IV 11, 219b3-9: An indication: we discern the greater and the less by number (ἀριθμῶ), and greater and less change by time (χρόνῳ); hence time is something like number (ἀριθμός τις). But ‘number’ is used in two ways: we call number both (a) that which is counted and countable (τὸ ἀριθμητόν) and (b) that by which we count. Now time is that which is counted and not that by which we count. And these two are quite different things.<sup>60</sup>

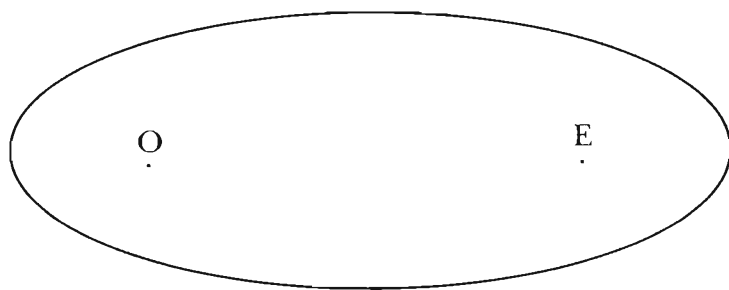
The concluding part of the passage suggests that the aforesaid ‘series’ should be taken *in concreto*, i.e. as *that which* is perceived as ordered in a series. Thus it is quite reasonable to take change and time *in concreto* as well: what is in time coincides with what is in change only

<sup>58</sup> Dutch: ‘aantal’, rather than ‘getal’. I owe to Professor C.J. Ruijgh a number of valuable additional linguistic data on the key terms ἀριθμός and χρόνος. See also P. Chantraine, *Dictionnaire étymologique de la langue grecque* (Paris 1968-80) s.vv., and Ruijgh (1996), 544-6.

<sup>59</sup> Interestingly, the same suffix is found in ῥυθμός = ‘any regularly recurring (hence measurable) motion’.

<sup>60</sup> This does not mean, however, that ἀριθμός in the sense of ἀριθμητόν (‘a stretch of time’) cannot be employed, in the context of perception, to indicate something by which we measure another stretch of time, or fast and slow. Thus elsewhere (e.g. at *Phys.* IV 11, 219b4-5; 12, 220b3-5 and 16-17), Aristotle speaks of (or implies) the instrumental function of time. Cf. Sorabji (1983), 86f.

in so far as the successive stages of things changing are put in an ordered series. To understand the nouns χρόνος and ἀριθμός in this way is indeed appropriate.<sup>61</sup> However, our understanding of Aristotle's definition of time is complicated by his introduction of the important constitutive notion of 'consciousness'. As a result the notion of time is associated not only with the ontological status of things in change and time, but also, even more prominently, with these things *qua being perceived*. Right at the start of his investigation at 217b31ff., Aristotle made it quite clear that the scarce and dim existence of time is entirely dependent on our perception of change. To put it otherwise, our problem with Aristotle's definition is that the word 'time' does not have *one* focal meaning: its semantic area actually resembles an ellipse, with two foci:



Thus χρόνος has a twofold connotation, one (O), bearing on the ontological condition that belongs to the changing things on their own, as a result of their physical conditions; the other (E), bearing on their property of being countable in the framework of our perception of the (different stages of) their change. The ontological condition can be referred to by using the words 'changing', 'transient', 'corruptible' and the like (none of which imply mental activity), but also by mind-dependent words like 'temporary', 'momentary', 'being subject to time' etc., which do imply our perception of them.

The first complicating factor in Aristotle's semantics concerning χρόνος is that the former group of indications is so closely related to the latter that Aristotle uses their members indiscriminately. For

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<sup>61</sup> Semantic Main Rule of 'double entendre' or 'semantic counterpoint (RSC)'; my section 1.71.

instance, the *physical* stages of change are often represented by corresponding *perceived* nows. Another complicating factor is Aristotle's customary cryptic manner of speaking, particularly his application of the Rule of 'double entendre' (RSC), of which we already observed instances in our discussion of 219b3-9.

### 12.33 *The exceptionally complex semantics of χρόνος*

In order to shed more light upon Aristotle's enigmatic definition of time we should take these two complexities into consideration. According to the 'double entendre' Rule (RSC), just as κίνησις should be taken not only for change but also *in concreto* for something subject to change, likewise χρόνος stands not only for the condition of temporality but also for something being in temporal conditions.<sup>62</sup> Moreover, the 'double focus' (O and E) present in the semantic area of χρόνος, complicates things even more: the close liaison between O and E, i.e. the adjacent conjunction of the notions, 'change' and 'time' — which indeed comes rather close to formal identity — in a way fuses temporality/temporariness and changeability/transitoriness. As we saw already, the latter, physical property of things is often inevitably couched in terms that primarily connote the perception of time. This feature notably comes to the fore where Aristotle associates 'being in time' with 'being physically acted upon by time' in the sense of being degenerated; and he opposes 'time-bound' to 'eternal' and 'universal'.<sup>63</sup> On the other hand, in the restrictive clause occurring in 14, 223a25-28, this ontological connotation of χρόνος is brought into focus, and its being perception-bound is explicitly disregarded for a while, so that the word is primarily taken as connoting that which *is involved in* time: "If there is nothing that

<sup>62</sup> The application of RSC is the more remarkable as in this context it bears on coincidental properties; for this application see my section 1.71. Sorabji rightly observes (1983, 89, re *Phys.* IV 11, 220a10-21) that Aristotle is concerned with counting instantaneous *entities* as well as with time *in abstracto*.

<sup>63</sup> *Phys.* IV 12, 221a30-b7; 221b28-30; 13, 222b16-27. Compare the opposition κατὰ χρόνον-ἀπλῶς at *Int.* 1, 16a18; my section 1.3. Likewise at *Top.* II 11, 115b13-14 the 'unqualified impossible' is put alongside what is 'time-bound impossible'. There are some pertinent comments on this basic issue of Aristotelian ontology in Hussey, 168f. "There are, in the sublunary world, counterbalancing degenerative changes [i.e. counterbalancing the perfective changes, derived from God's continuous input of energy via the celestial rotations, *De R.*], explained by the imperfection of sublunary things, and attributable to no one force, strictly speaking; it is these that are called, in an illuminating metaphor, the actions of time" (Hussey, 169).

has it in its nature to count except soul, i.e. its intellectual part, then it is impossible for any time to be without soul, *but at best 'time' in the sense of what is in temporal conditions* (ὁ ποτε ὄν ἔστιν ὁ χρόνος) " (223a26-27), i.e. the substratum of time.<sup>64</sup>

12. 34 *The ontological connotation of χρόνος. The use of the ὁ ποτε ὄν clause*

In the ontological connotation represented by point 'O' of our semantic ellipse, it is the mode of being generically signified by the category of When (Ποτέ) that is under consideration.<sup>65</sup> We already came across the phrase ὁ ποτε ὄν at 219a19-21, where the before-and-after in change was referentially identified with that which is changing taken in its capacity of being given in temporal conditions, i.e. as a ποτε ὄν. This passage is alluded to at 219b10-15, where the thing involved in time is referred to by 'the (successive) now(s)':

*Ibid.* 11, 219b10-16: Time in its entirety is a self-identical entity; for the now when<ever> it was<sup>66</sup> is the same <as any other now> (although its actual being is different). It is the now that divides time, considered as (ῆ) before-and- after. The now is in a way the same, and in another way not the same: in so far as (ῆ) it is present in a thing's different stages, it is different (*that* was in each stage its now),<sup>67</sup> but that which

<sup>64</sup> Lit.: 'what being, time exists' (ἔστιν), that is to say that from this point of view, 'time' completely coincides with the substrate's 'temporality', assuming that things' 'changeability' is taken as their 'temporality'. Thus χρόνος should be taken *in concreto*; see the semantic Main Rule (RSC); my section 1.71. *Pare* Sorabji (1983), 90; Cavagnaro (1995), 109ff., and nearly all other commentators, the relative pronoun ὁ goes as a predicate noun with the participle ὄν, rather than as a subject with the finite verb. Cf. *PA* II 2, 649a14-15, and see my next section.

<sup>65</sup> *Cal.* 4, 1b26; 2a2. Note that there is a sliding scale of the uses of the indefinite ποτέ ('at some time or other') from 'at a certain time' to 'at any time whatsoever'. I occasionally am subsuming these shades of meaning under the generic phrase 'in (its) temporal conditions', which also happily embraces the abstract use of ποτέ ('the universal property of 'temporality/temporariness/momentariness').

<sup>66</sup> Reading ὁπότε ἦν, instead of the common reading ὁ ποτ' ἦν. On the common reading, 219b11 does not count among the occurrences of the phrase ὁ ποτε ὄν either, *pace* Hussey (1983), 152 and Bemelmans (1995), 212, n. 105. Bragues (1982, 114-6) rightly takes this occurrence of ποτέ to be a difficult case, let alone that this passage could be regarded as the basic one (as it is taken by Wieland (<sup>2</sup>1970, 324), among others). He thinks (115) that the only possible rendering could be: "Le mouvement qui était à ce moment est le même", but deems the words ὁ ποτ' ἦν, τὸ δ' εἶναι αὐτῷ ἕτερον a gloss made by a 'lector eruditus'.

<sup>67</sup> Retaining the MSS reading τὸ νῦν, instead of the superfluous conjecture τὸ νῦν <εἶναι> (Bonitz, Ross, Bragues).

being at its successive instants (ὅ δέ ποτε ὄν)<sup>68</sup> the now [the instantaneous thing] *is, that* is the same. For change follows magnitude, as was said, and time, we assert, follows change.<sup>69</sup>

Other occurrences of the phrase ποτε ὄν (outside *Phys.*) are *PA* II 3, 649b24, and *GC* I 3, 319a33-b4;<sup>70</sup> and in the preamble to the former passage, viz. *PA* II 2, 648b35ff., there is a related use of ποτέ (at 649a14-15). In 648b35ff., Aristotle is trying to clarify the difference between cases in which bodily heat belongs to the bodies themselves and those where it comes from outside, by analysing the concepts 'hot *per se*' and 'hot *per accidens*' as said of blood. We can indeed speak of 'hot blood' either in the sense that it is hot by itself, i.e. essentially, or meaning that it derives its heat from elsewhere. Now to Aristotle, heat ('being hot') is simply a coincidental property blood derives from the heart, or from the celestial heat which has its main seat in the heart. To ignore this distinction makes it impossible to say whether a thing is hot or is not (648b35-649a14). He makes use of the notion of ποτέ in a way similar to that in our *Physics* passage, to express the formal identity of blood ('blood is blood') when taken apart from its actually being hot from without, while setting this against blood coupled with heat as a coincidental attribute. He then puts the formation 'hot-blood' on a par with other word strings (συνδυαζόμενα) like 'hot-water' or 'hot-iron', which taken as a one-word expression (ὄνομα) indicate the actual substrata *including* their (coincidental) property of being hot. Thus αἷμα can be used to stand for a hot stage of something underlying heat, which by itself is not hot, but none the less may be called 'hot-blood'. The substrate is referred to by using ποτέ in a way similar to the one found in the ὅ ποτε ὄν formula (i.e. as an adverb indicating the object's 'being in time'), the difference being that at 649a14-15 (ὃ μὲν γάρ ποτε τυγχάνει ὄν τὸ ὑποκείμενον) it goes with a finite verb, rather than with a participle:<sup>71</sup>

<sup>68</sup> Cf. Bragues (1982), 105. The adverb ποτέ (= 'at a certain moment') is here used distributively ('at any instant'). Compare the use in common Greek of the indefinite pronoun τις for 'anyone concerned', 'everyone'. Liddell & Scott *s.v.* A II 2.

<sup>69</sup> Cf. 12, 220b24-28.

<sup>70</sup> The *GC* passage will be dealt in my section 12.39.

<sup>71</sup> Unlike in the other occurrences of ποτέ, in this construction, in which ποτέ is not followed by ὄν, the relative pronoun must be the subject, loosely taking up the ἔνι of 649a13. Or should we supply <ὄν> after ποτε, and take ὃ to be the predicate to this ὄν, and render the sentence thus: "For that which it [sc. such a thing as meant at 649a13 by ἔνι] in the successive instants happens to be, viz. the substrate"? Either way, the status of the persistent substrate comes well to the fore, and is described in a similar way as at 3, 649b23-24.

PA II 2, 649a14-17: For what at its successive instants the underlying thing happens to be is not <as such> a *hot* thing; but taken together (συνδυαζόμενον) <with the attribute, heat> it is a hot-thing, just as if one attached to hot water or hot iron a single name (ὄνομα) [viz. 'hot-water' and 'hot-iron'].<sup>72</sup>

In the subsequent chapter, in which clearly the line of thought of ch. 2 is retained, the persistence of the substrate is given emphasis with the help of the usual formula ὁ ποτε ὄν:

*Ibid.* 3, 649b20-27: These distinctions, then, being made, it is plain that the blood taken this way [i.e. together with its heat] is a hot-thing — as if this were the quiddity of blood, just as 'boiling-water' were thus used if we were to signify it by a single name — but the underlying thing, i.e. (καὶ) that which being in its temporal condition, the blood *is* (ὁ ποτε ὄν αἷμά ἐστιν),<sup>73</sup> *that* is <as such> not something hot. Blood, then, taken by itself (καθ' αὐτό), is in a certain sense hot, and in another sense it is not: for its heat features in its description (ἐν τῷ λόγῳ [viz. 'hot-blood']), just as paleness does in the definiens of 'pale man', but in so far as (ἥ) blood is taken with regard to the property it undergoes (κατὰ πάθος) [i.e. as substrate], it is not hot in itself.

Speaking generally, ποτε ὄν clauses serve to pierce below the surface of a thing's ever-varying coincidental appurtenances, to lay bare its underlying structure ('substrate') which remains in the lapse of time. Thus the formula (referentially) denotes a thing's actual being — instead of formally signifying its essence, as Hussey (148f.; 152) takes it by rendering: "what makes it what it is". We should instead take the basically temporal sense of ποτέ into consideration. That is to say, the use of the phrase ποτε ὄν *in appposito* causes the thing under examination to be referred to in its capacity of *persistently* underlying the different stages of change. But it is true, since this construction does not advance the object *including* its successive conditions (συνδυαζόμενον), it *in effect* bears upon the thing as it happens to be apart from these varying conditions ('blood by itself', 'moving thing by itself', 'point by itself, and so on). None the less, the formula as such does not refer to the thing's essential nature ("whatever it is by being which blood is blood"; Hussey, 148). The only universal aspect of ποτε ὄν is that it generalizes τὸ νῦν.

<sup>72</sup> The subtle difference between taking ὁ as a subject (rendering: 'what the underlying thing happens to be') and as a predicate noun (as above) is aptly explained by Bragues (1982), 107f.

<sup>73</sup> Bragues's rendering (109) seems to be less adequate: "le substrat et ce qu'étant à un moment donné il (sc. le substrat) est sang, n'est pas chaud".

Returning now to the *Physics* passage quoted above, the successive nows are evidently to be taken (ontologically) as representative of the successive stages of change. The words ‘magnitude’, ‘change’, and ‘time’ should be understood *in concreto*, i.e. as primarily standing for *things having* magnitude, and so on; their being subject to change and time is manifest from the subsequent lines, in which the formal identity of the different stages of change (‘change is change’) is set against the extensional differences between the changing objects considered in the successive stages. These differences are elucidated (219b18-21) by contrasting the permanence-in-time of the changing thing with its varying appearances. The diversity of the successive stages is even stressed by Aristotle referring to the way in which sophists assume that Coriscus-being-in-the-Lyceum is different from Coriscus-being-in-the-marketplace (to abuse this formal difference for a paralogism in which it is taken extensionally, to prove that the man is different from himself):<sup>74</sup>

*Phys.* IV 11, 219b16-33: And likewise there is a dependent sequence<sup>75</sup> of the moving body, by which we recognize movement and the before and after in it, upon the point. In fact (δὴ), what this thing [i.e. the moving thing] being in the lapse of time is (ὁ μὲν ποτε ὃν ἐστὶ)<sup>76</sup> is the same thing (I mean the moving point,<sup>77</sup> or stone, or something of the

<sup>74</sup> Simplicius (CAG IX, p. 723<sup>11-20</sup>) reports that the argument was ‘Coriscus, being the same, is now in the market-place and now in the Lyceum; whoever comes to be now in the market-place and now in the Lyceum comes to be different from himself; therefore etc.’. Cf. the identity fallacies in Plato, *Euthydemus* 275E ff.

<sup>75</sup> Supplying (not, reading) ἀκολουθεῖ from b15. Ross *ad loc.* (1936, 599f.) has: “The analogy between movement and the μέγεθος (path) it covers, in respect of continuity, was brought out in a10-19. Aristotle now points out that there is a similar analogy between the point which traces out the path, and the moving object which traces out the movement. He is evidently working with the conception of the line as produced by the fluxion (ρύσις) of a point (*De An.* 409a4, P. [Philoponus] 727.25, S. [Simplicius] 722.28. 724.34, Iambl. *In Nicom. Arithm.* (ed. Pistelli) 57.8)”.  
<sup>76</sup> Adding ἐστὶ with codex Vaticanus 1027. Cf. Bragues, 105.

<sup>77</sup> Ross (600): “In b15-18 the στιγμή (i.e. the geometrical point) has been treated as the generator of the path (μέγεθος), as the φερόμενον is the generator of the movement. *Here* στιγμή is, by an unfortunate lapse, treated as a φερόμενον; and *here* therefore στιγμή must be used in the sense of a particle. [...] The MS reading may be defended by reference to 227b16, where στιγμή is used of a moving material particle”. As a matter of fact, Ross is wrong in speaking of a lapse in Aristotle’s use of στιγμή at 219b19. He fails to notice that, in accordance with what I have indicated as the semantic rule of ‘double entendre’ (RSC; section 1.71), Aristotle first (b16-18) takes στιγμή (like φερόμενον, for that matter) for ‘point taken apart from its moving’ (like φερόμενον for ‘changing thing, not including its successive conditions’) — meaning ‘a point is a point, period’ — and afterwards takes (b19) it for ‘point including its successive positions’, meaning ‘this point here is not that point over there’.

kind); but taken according to the description of its successive stages ( $\tau\hat{\omega}$  λόγῳ), it is different — in the way, indeed, in which sophists assume that Coriscus-being-in-the-Lyceum is different from Coriscus-being-in-the-marketplace, and assert that these, of course, are different things, owing to the different places. And the now follows the moving thing as time follows change: for it is by the moving thing that we become acquainted with the before-and-after in change, and in so far as ( $\hat{\eta}$ ) the before-and-after are countable [i.e. can be put in a series] the now comes to be. Hence, in these cases too, that which at successive instants, a now [i.e. an object given at this or that moment] is ( $\delta\acute{\omicron}$  μὲν ποτε ὄν νῦν ἐστι), is the same — for the before-and-after is what is in the changing thing — but the now's actually being <successively> is different; for in so far as ( $\hat{\eta}$ ) the before and after can be put in a series, the now comes to be. And what is the most familiar of the things involved is this thing [i.e. the thing in its successive stages]; for change is known by what changes, and motion by the moving thing; for the moving thing is a *this*, while change is not.<sup>78</sup> Hence the <thing being> now is in a way the same always, and in a way not the same; for this also holds of the thing moving.

## 12. 35 *The nature of Time itself. The epistemological connotation*

Evidently, in the foregoing texts the ontological connotation of χρόνος prevails in that they primarily deal with *things* involved in change and time, in spite of the fact that they are frequently brought up in time-bound terms. From 219b33 onwards, the attention clearly shifts to the nature of time itself, and thus the epistemological connotation features prominently. We are reminded that the property of 'being now' (or 'momentariness') attributed to changing things is a time-bound notion; and the conception of changing things in terms of their successive conditions, accordingly, depends on the 'countability' attached to both the moving or changing thing and motion or change.<sup>79</sup> Along these lines it is possible to shed light on the relationship between the perceived nows and time: the things' momentariness and their involvement in time are conditioned by their common property of being susceptible of ἀριθμός:

*Ibid.* 11, 219b33-220a4: It is also manifest that if there were no time, there would be no now either, and if there were no now there would be no time. For just as 'moving thing' and 'motion' go together, so too do the counting (ἀριθμός) of the moving thing and that of its

<sup>78</sup> No doubt, τὸ φερόμενον should be taken *ad sensum* for both moving and changing things, as κίνησις seems to include φορά. The generic use of κίνησις for change of any sort is indicated by Aristotle at *Phys.* IV 14, 223a29-b1.

<sup>79</sup> Aristotle is kind enough, this time, to make his use of RSC explicit.



motion. Time indeed is the total sum (ἀριθμός) of the motion, and the now is, like the moving thing is, so to speak (οἶον),<sup>80</sup> a unit of the total sum.

Next the position of Now with reference to Time is brought into focus. Both the continuity and the divisibility of time are due to the now; for it is likewise the now corresponding to which both motion and the moving thing have a dependent sequence (220a4-6). Along these lines the continuity and divisibility of time are explained; once again, the ποτε ὅν formula turns out to be useful to clear up (by negative evidence, this time) the special property Aristotle has in mind:

*Ibid.* 11, 220a6-9: For <on the one hand>, change and motion also owe their being one (μία) [i.e. continuity] to the moving thing, because this remains one and the same (ἐν) — and <speaking of oneness, I do> not <mean this> in terms of what being at a certain stretch of time (ὅ ποτε ὅν), it is: for this may leave intervals; but what is one in terms of what it is called (τῷ λόγῳ)<sup>81</sup> <at its successive stages >. And on the other hand (δὲ), this <now> is also that which delimits the successive stages of the motion-change.

The now shares this double function with the point; the latter, too, both makes the length continuous and delimits it, serving as the beginning of one length and the end of another. In the case of movement, however, the now<sup>82</sup> is always different, because the moving thing is always in a different position (220a9-14). Time and its continuity can be defined in terms of the different points and nows, counted (or at least countable) as they are, owing to their successive appearances in the process of change. On the other hand, the now considered as a limit is not time, properly speaking: it only falls to time. But in so far as (ῆ) it is involved in the process of counting, it is an agent in this process. The difference between the now as a limit and time as a counted (countable) whole is obvious: limits merely divide lines at a certain spot, while the sum total of, say, these ten horses is not tied to this particular series of ten (220a14-24; cf. 12, 220b10-12).

<sup>80</sup> For οἶον used in the sense of 'so to speak' or 'that is to say' see also Goldin (1996), 43; our *Index*, s.v.

<sup>81</sup> Cf. ἐν τῷ λόγῳ at *PA* II 2, 649b25 (my section 12.34).

<sup>82</sup> It is clear from the subsequent 'because' clause that τὸ δὲ νῦν at a14 must be taken to include (in accordance with RSC) *things* in their momentary conditions. Note that Greek idiom not only allows substantivated uses of the adverb νῦν (τὸ νῦν, τὰ νῦν) but its use as an adjective as well (οἱ νῦν ἄνθρωποι).

The chapter winds up by presenting the previous (219b1-2) definition of time as resulting from the foregoing discussions:

*Ibid.* 11, 220a24-26: It is plain, therefore (τοίνυν), that time is the arithmos of change with reference to before-and-afterness, and it is continuous; for the change is continuous.

Our foregoing observations can be adduced in support of expanding<sup>83</sup> this definition as follows: time, temporality and momentariness, that is, is *what is implied in the sequential character and in the countability (ἀριθμός) of the process of change, including the things involved in this process (κινήσεως)*, and all this, owing to the before-and-afterness of its (their) successive stages (κατά τὸ πρότερον καὶ ὕστερον), taken as continuous.

## 12. 36 *Further observations about Time in chs. 12-14*

The three remaining chapters of *Physics* IV contain a more or less coherent collection of supplementary notes intended to further clarify the nature of time, by offering more details about the marked traits of its constitutive elements. They contain quite a number of statements already presented in the previous chapters.<sup>84</sup> It would go beyond the scope of our methodological interest in Aristotle's discussion of time to deal with them extensively.

Chapter 12 is about various attributes of time, and is closely related to the epistemological connotation in χρόνος. In 220a27-32, once again the series character of ἀριθμός comes to the fore. It is in terms of its countable aspect (ἢ ἀριθμός) that we speak of time as much or little, and in terms of its continuity (ἢ συνεχής) that we speak of long and short; but as we do not speak of a fast or slow portion of time by which we count, we do not speak of fast or slow time either (220a32-b5). Time in general is the same everywhere, but there are different nows and periods of time, such as the present, the past and the future. In the case of a hundred horses and a hundred men, the number is the same, but the horses are different from the men (220b5-12). As the same movement can be repeated, so can the same

<sup>83</sup> Compare Ross's comment (605) on 12, 221a11: "We cannot use the phrase 'in number' in this sense, but perhaps 'included in the numerical system' will serve for both the senses of ἐν ἀριθμῷ mentioned in 11-13".

<sup>84</sup> The chapters may well be older than chs. 10-11, as is sometimes assumed, but can also be taken as written as additions. Anyway, they are handed down as subsequent chapters.

time, e.g. a year or spring or autumn (b12-14). We count and measure change and movement by each other — and quite understandably so, because change follows magnitude and time follows change (220b14-32).

From 220b32 onwards, the ontological connotation is the leading one.<sup>85</sup> First, in a linguistic intermezzo (221a9-b14) the phrase ‘to be in time’ (τὸ ἐν χρόνῳ εἶναι) is differentiated into

(a) ‘to be when time is’. This sense of the phrase is said to be so weak by its resting on mere chronological coincidence that it indicates no real relationship whatsoever between time and what is thus ‘in time’;

(b) ‘to be in time in the sense of being involved in a countable series’;

(c) ‘to be surrounded by, subject to, and acted on by time’, “just as we are in the habit of saying ‘time wears things away’, ‘everything is aged by time’ (221a31-32)”. Thus time is destructive. In fact, although this ‘being in time’ is, strictly speaking, not formally identical with ‘changing’, these two are mutually implicative. Therefore eternal things are not ‘in time’, and rather ‘timeless’.<sup>86</sup> But what is at rest, too, is in time; for all rest is in time, and is measured by time.<sup>87</sup>

Some corollaries are stated in 221b14-222a9. Things that are generable and corruptible — which sometimes are and sometimes are not — must be in time: time embraces both their being and their not being the case. But things that cannot be otherwise than non-beings are not in time, such as the diagonal’s being commensurate with the side, and the like. And although their contraries are always the case, like the diagonal’s being incommensurable, they are none the less not in time either.

Chapter 13 goes on to deal with some temporal terms. First, there is a brief account (222a10-20) of the ‘now’ as the link between before and after, and the boundary between them; cf. 11, 220a4ff. Next, the meaning of ‘the things now’ (τὰ νῦν) is differentiated into (a) the

<sup>85</sup> Verbeke (1985, 119-22) unduly criticizes Aristotle for not, like Plotinus did, considering time’s origin. In fact, Aristotle once and again underlines that time ultimately rests on the changeability and corruptibility of the sublunar world.

<sup>86</sup> For κατὰ χρόνον as opposed to ‘universal’, my section 1.3. By the way, it is (*pace* Ross 1961, 308, to *An.* III 7, 431b17-19) to 220b32ff. that Aristotle seems to refer at *An.* III 7, 431b17-19, *juncto* *Mem.* 1, 450a7-9: “Why it is impossible to think of anything without the idea of continuity, or to think of things that are timeless except in terms of time, is another question”. Thus not only the concept of time is implied but, in the context of discontinuity, number as well.

<sup>87</sup> Part of Aristotle’s remarks are confirmed at 13, 222b16-27.

things that are now in the previous sense of 'now', and (b) the things that are at a time which is near to the previous 'now' (222a20-24).

The meaning of the indefinite noun ποτέ gives rise to some remarks about the ubiquitous nature of time (222a24-b7). 'Sometime' (ποτέ) refers to a time that is definitely related to the first sense of 'now', but it differs from it in that this time is not instantaneous but rather a certain stretch of time. As long as there will be motion, there will be time. Since time is always at a beginning and at an end, and the now is never the beginning and the end of the same time, time is always changing; and because it is always at a beginning, time will not give out.

Next there are some remarks about the use of the adverb 'just' (222b7-16), followed by an amplification (222b16-27)<sup>88</sup> of what is found at 12, 221a26-b7.

Chapter 14 opens with a section (222b30-223a15) that compares badly with the careful discussion of 'being in time' at 12, 220b32-222a9.<sup>89</sup> At 223a16-29 two interesting questions are discussed: (a) how is time related to the soul?, and (b) why is time present everywhere? The first is answered (a21-29) in line with the previous discussion on this subject (my sections 12.32-12.33; 12.35): without a soul there would be no 'counting' or perception of time, only the substratum of temporality, — motion (including the moving *thing*).<sup>90</sup> In fact, Aristotle here alludes to what we have marked off before as the epistemological and the ontological connotations of χρόνος. The answer ventured to the other question is that time is an attribute of motion, namely its condition of countability (ἀριθμός γε ὧν), and that the entire cosmos (earth, sea, and heavens) is subject to motion, and that time and motion are coextensive both potentially and actually. (223a18-21). This coextensive nature of time and motion — indeed every kind of motion, not only locomotion — is given further

<sup>88</sup> Hussey rightly emends (1983, 168) πράττειν at 222b23 into πάσχειν.

<sup>89</sup> Hussey (1983), 172.

<sup>90</sup> Once more, the ὅποτε ὧν formula is used at 223a27: without soul, and indeed the intellectual part of soul, there will only be that which at the successive instants 'the temporary' (ὁ χρόνος, taken *in concreto*) is (τοῦτο ὅποτε ὧν ἐστίν [instead of the orthotonic ἔστιν of the editions; see, however, Bragues, 103] ὁ χρόνος). One would expect the masculine participle ὧν (instead of the neuter ὧν), but the use of the neuter can be explained as a result of attraction (because of the neuter predicate noun ὅ). This attraction is less surprising on account of the fact that the phrase has become so habitual with Aristotle that he can use it even where the subject is a masculine noun; cf. Ross *ad loc.*

attention in 223a29-224a2, including time taken as the movement of the celestial sphere, and the issue of circular motion.

The chapter winds up (224a2-15) with a remark on the issue already dealt with at 223b1-12, to the effect that the time of different events is the same time, provided that it is equal and simultaneous, just as the number of different collections is the same number if the collections are equal. The distinctions between the times involved is elucidated in terms of formally different quiddities:

*Phys.* IV 14, 224a2-15: It is also correct to say that the number of sheep and that of dogs is the same, if each number is equal, but that the decade is not the same: i.e. (οὐδὲ)<sup>91</sup> that the things making up the decade are not, just as the equilateral and the scalene are not the same triangles, although they are the same type of *figure* (σχῆμά γε), in that both are triangles. For a thing is called 'the same' which does not differ by a differentia, but 'not the same' if it does; as in the case in which a triangle differs from another by a difference in triangularity, and they *therefore* are different triangles, without differing, however, by the differentia 'figure', being indeed in one and the same division. For a figure is either such-and-such, viz. a circle, or so-and-so, viz. a triangle; and of the latter one is equilateral, another scalene. Hence they are the same figure, namely a triangle, but in their triangularity not the same. Now, <in the afore-mentioned example> the number is the same (for their numbers do not differ from one another by the differentia of number), but the decade made up by them is not the same, since the things it is said of are different: dogs in one case, horses in another.

The inquiry is then concluded: "And thus an account has been presented both of time itself and of the connected matters proper to the inquiry". Reviewing the discussions in their entirety, we see Aristotle dealing with the sticky problems concerning Time in his customary way of painstakingly defining the key notions, and treating the remaining (or resulting) questions in the framework of the basic view couched in his own definition of time. Small wonder that in these matters focalization and categorization (particularly coming to the fore by his extensive use of the *qua*-locution) are pivotal elements of Aristotle's strategy of argument.

## 12. 37 *The problem of 'Prime matter' in Aristotle*

At least from Medieval times onwards, Aristotle has been supposed to posit the existence of Prime matter, an utterly formless matter,

<sup>91</sup> Taking οὐδέ as the negation of καί explicativum.

serving as a purely indeterminate substrate underlying any material composition, including each and every process of substantial change. Roughly speaking, this position is found in two versions. Some ascribe prime matter to Aristotle as underlying any process of generation of a substance, while others confine its role to the generation of the simple bodies known as the four elements — fire, air, water, and earth — alone.<sup>92</sup>

It is important to realize that in the *Corpus*<sup>93</sup> the concept of 'prime matter' (πρώτη ὕλη) is definitely not *the* technical label to indicate an entirely formless matter. The term is actually used to denote that matter which in a series of material causes is counted as number one. Thus depending on the *terminus a quo* chosen for this count, the word πρώτη ὕλη is used to stand for a thing's 'proximate matter' or its 'ultimate matter' as well.<sup>94</sup>

Richard Bemelmans has good reason to challenge the authenticity of the notion 'prime matter' in either version because of its incompatibility with several basic tenets of Aristotelian thought. First, it does not square at all with the fundamental notion of ὕλη as indicating every material 'out of which' something can be made, and, accordingly, functioning as an ἐξ οὗ in every process of becoming. The concept of potentiality, in particular, which is so elementary in Aristotle's philosophy, is hardly compatible with the idea of an 'out of which' that is entirely indeterminate: to Aristotle, a thing [*x*] can only be taken as potentially [*y*] if [*x*]'s proximate matter is actual. Even the element, earth, Aristotle asserts, cannot be regarded as a potential man, and needs to have a higher degree of actuality.<sup>95</sup> Besides, to the prime matter Aristotle is credited with (particularly in the strong version) persistence can hardly be attributed as a substrate.<sup>96</sup>

<sup>92</sup> Bemelmans (1995, 1-18; 33-59; 73-9) extensively discusses these two main versions, including their numerous variations.

<sup>93</sup> *Phys.* II 1, 193a29; *GC* II 1, 329a23-34; *GA* I 20, 729a32; II 1, 733b26; *Met.* Δ 4, 1014b32; 1015a7-10; 6, 1017a5; H 4, 1044a18 and 23; Θ 7, 1049a25-27; my section 11.15.

<sup>94</sup> See Bonitz, *Index*, 786b8-14; Bemelmans, 19-31. Cf. *EN* III 5, 1112b19-20, where it is said that the primary cause (τὸ πρῶτον αἴτιον) in the order of discovery is the last (ἔσχατον). For a general account of 'matter' see *Met.* Z 7, 1032a17: "that out of which things come to be, *which we call 'matter'.*"

<sup>95</sup> *Met.* Θ 7, 1048b37-1049a15. Graham too, an adherent of prime matter in Aristotle, concedes (1987, 483) that "having potentiality must be a consequence of having some *actual* (italics mine) constitutive properties". Instead of rejecting the odd idea of prime matter in Aristotle as entirely indeterminate stuff, Graham (482f.) blames Aristotle for having it.

<sup>96</sup> Graham (484) too recognizes this inconvenience: "It would seem that there is

From the viewpoint of sound philology, it seems pertinent to look for a solution to the prime matter problem which is more in line with Aristotelian thought, rather than obstinately ascribing to Aristotle a notoriously incoherent notion.<sup>97</sup> John Ackrill (1981, 33) addresses the traditional 'prime matter' issue with his customary critical sense:

"It is a matter of dispute whether Aristotle's use of the form-matter distinction does in fact commit him to the actual existence of prime matter, or whether in his hands it is only an analytical device leading to no such metaphysical puzzles. [...] Can there be such a thing as pure form without matter - or would this be a quite unintelligible suggestion? Can Aristotle say that matter and form can be distinguished in everything, as aspects of everything, without having to claim that there could be matter without form and form without matter?"

The answer is: Yes, he can, and, more importantly, he does.

12. 38 *[X]'s being [y]'s matter' taken as [x]'s special mode of being*

Every attempt to retain the notion of utterly indeterminate 'prime matter' is bound to lead to insurmountable problems and unsatisfactory interpretations.<sup>98</sup> This might lead us to reject any idea of the 'out of which' as a fixed 'thing', and instead to approach it along the lines of the devices of focalization and categorization argued for in the present study.<sup>99</sup> This means that we should no longer take matter as some 'thing' in an absolute sense, having, that is, a unique position

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no possible ground for establishing continuity, since by hypothesis [on whose hypothesis?, not Aristotle's, *De R.*] prime matter does not have any characteristics of its own [...] the whole notion of a characterless substratum that retains its identity is incoherent". Graham is forced to speak of 'the paradox of prime matter' (477), and to consider Aristotle's position as "based on an error of analysis" (483), consisting in "casting supervenient characteristics in the role of constitutive characteristics" (488f.). Why should we not consider whether *our* 'hypothesis' is perhaps wrong?

<sup>97</sup> I take the liberty of referring to what I on an earlier occasion remarked upon (1986, 20f.) namely the 'disease' of solving home-made problems of interpretation concerning a famous author by imputing to him 'negligence', 'making slips' or 'inconsistency', and the like, because he does not keep to our views of his views. "This kind of approach makes virtues of the very shortcomings of one's own interpretation and has, to my mind, much in common with Emmenthaler cheese, in which the holes form part of its attraction".

<sup>98</sup> Bemelmans, 61, 166.

<sup>99</sup> Also De Rijk, 1980 and 1988. For the categorization thesis in general see De Rijk (1980) and (1988), and my sections 2.4; 2.6; 2.7; 4.1-4.2; 4.32; 7.41; 11.12-11.15.

in the system, both ontologically and epistemologically, with the remarkably property of being potentially *everything* — a property indeed happily compensating its sad property of being actually just *nothing*. Instead '[x] to be the 'out of which' or ὕλη of [y]' should be taken to mean that something which is actually [x], can, if you wish to focus upon precisely *this* capacity, also be categorized as a potential [y], or [y]'s 'matter', *n'en déplaise*, of course, that it can also be brought up after one of its many actual modes of being. Thus there is no room for any such thing as 'prime matter' in any variety, neither as a miraculous element in substantial change, nor in the generation of the four elements themselves.

To support this alternative view of 'matter', which can put an end to persistent misunderstandings concerning the notion of πρώτη ὕλη in Aristotle, Bemelmans refers to Aristotle's habit of analysing particular objects into their various modes of being, and then picking out a special mode of being appropriate to the discussion at hand. Just as [x] can be named in its capacity of being a subsistent thing, something beautiful, or after one of its other modes of being, it can also be brought up qua being the 'out of which' of something else. Bemelmans (95-110) considers these various modes of being 'formal entities', i.e. things taken in a certain mode of being. To him, Aristotle in fact considers matter as such a 'formal entity'.

The label 'formal entity' might suggest that our speaking of 'matter' is merely due to our using a logical device, since it bears on a thing's 'being out of which' *in so far as* the object is brought up after this special mode of being. To regard matter strictly as a formal entity and nothing more would not fit Aristotle's realism: to him, the use of any logical device takes place 'cum fundamento in re'.

To avoid any misunderstandings on this score I prefer to call the various modes of being as brought up by the categories ('categorical designations') 'aspects of being' — the label 'aspect' having both the intended logico-epistemological connotation and the ontological one of 'feature': we observe aspects an extramental thing *possesses* (or is supposed to possess).

To my mind, 'matter' can best be taken to be a relational name, such as 'father', 'master', 'prior' and 'posterior', which implies that it in fact functions as 'being matter of something else', just as the categorical designation 'father' equals 'being someone's father': a father possesses the property of fatherhood alongside an array of other modes of being, among which at least his being a subsistent



being; likewise [*x*]'s property of being the 'matter' (the 'out of which') of [*y*] presupposes its actually being an [*x*].

Aristotle's discussion of the *τρόποι τῶν αἰτίων* in *Physics* II 3 presents a significant example of the procedure of focalization and categorization, which enables us to put the notion of material cause into the right perspective.<sup>100</sup> In this chapter (like in the *Lexicon*, *Met.* Δ 2), Aristotle discusses the various ways in which things can be named 'causes'. After presenting (194b23-195a4) his well-known four causes (formal, final, efficient, and material causes) he points out that one and the same thing, say, a statue can have various causes, according to its various modes of being (e.g. its being a statue, its being made of bronze, its being an artificial product etc.):

*Phys.* II 3, 195a3-8: This is a rough classification of the ways in which causes are so called. But, given that 'cause' is used in many ways, it also happens that one and the same thing has many causes. And this not by coincidence (οὐ κατὰ συμβεβηκός); for, e.g., it is not according to its being something else (οὐ καθ' ἕτερόν τι) but qua (ᾧ) statue that the art of statue-making and the bronze are its causes. Not in the same way, however: the latter as its matter, while the former as that from which (ὡς ὅθεν) the change proceeds.

Consequently, causes are in various ways related to the thing caused, and can be brought up in corresponding ways, e.g. as its material or efficient cause etc. Moreover, one and the same cause can be brought up according to different modes of being. This is illustrated by Aristotle for a statue's efficient cause:

*Ibid.*, 195a32-b3: And again a cause <may be brought up> as what it is in a coincidental capacity (ὡς τὸ συμβεβηκός),<sup>101</sup> and also in capacities generic to it (τὰ τούτων γένη).<sup>102</sup> For instance, the cause of a statue is in one way <of naming> 'Polyclitus', in another 'sculptor', because it is incidental (συμβέβηκε) to the sculptor to be Polyclitus. Also embracing designations can be used, e.g. if 'a man' is <brought up as> the cause, or more generically 'an animal'. Of the coincidental

<sup>100</sup> Bemelmans, 87-95.

<sup>101</sup> I.e. after a mode of being that is alien to its being a cause (καθ' ἕτερον τι); cf. 195a6-7. The ἕτερον device is, so to speak, the counterpart of the *qua*-device. The use of the phrase κατὰ συμβεβηκός in this context does not imply that the thing which is the cause is not named after its essential being, but that it is named after one of its modes of being that has nothing to do with its being a cause. Compare Aristotle's strategy of argument at *Cat.* 7, 7a22-b7; my section 13.3.

<sup>102</sup> Thus concerning, say, Socrates we can use the coincidental name, 'pale' or a generic one like 'coloured' or 'quale', just as in the case of subsistent categorization, he can not only be brought up by the name 'man' but also by one of the generic ones, 'animal', 'living body' etc.

causes [i.e. designations of the cause] some are more or less remotely related <to the cause's primary designation>, if, for example, 'the pale' or 'the educated' is brought up as the cause of the statue.

The differentiation of names applicable to the cause even goes one step further, both with reference to the appropriate designations (τὰ οἰκείως λεγόμενα) and the coincidental ones (τὰ κατὰ συμβεβηκός): each of them may be brought up as able to cause or as actually causing. E.g. with regard to the cause of the building of a house you may speak of the builder or of someone who is actually engaged in building (195b3-6; cf. I 8, 191b27-29).

On several other occasions as well, Aristotle applies the *qua*-locution to make sure that words are used in the appropriate way. Failing to make the appropriate focalization, he says in *Physics* I 8, some thinkers of early times went so far as to assert that nothing comes to be or passes away (191a23-33). He makes his own view clear by comparing the issue of substantial change to the way in which there is mention of coincidental change: the old thinkers should have been aware of the distinction between two ways of coming-to-be out of what is not and passing-away into what is not. It is pertinent to notice Aristotle's use of the *qua*-locution to clarify how one should understand 'coming-to-be out of what is not':

*Ibid.* I 8, 191a33-b10: We, on our part, assert that the expressions 'to come-to-be out of what is or what is not' or 'that what is or what is not acts upon something or is acted upon' or 'that something whatever becomes this or that thing' in a way resemble such ones as 'the doctor does something or undergoes something'; or 'something has turned out or turns out of a doctor'. Hence since the latter expressions are used in two senses, clearly the same also goes for the expressions 'out of something which is', and 'what acts or is acted upon'. Thus: a doctor builds a house, not *qua* (ᾧ) doctor, but *qua* builder, and he comes to be pale, not *qua* doctor, but *qua* dark. But he doctors, and comes to be ignorant of medicine *qua* doctor. Now we must properly say that a *doctor* acts or is acted upon, or that something comes to be out of a doctor only if it is *qua* doctor that he does or undergoes or comes to be this. It is plain that 'to come-to-be *out of what is not*' means '<out of what is not> *qua* something which is not' (ᾧ μὴ ὄν).

The earlier thinkers' mistake of supposing that absolutely nothing can come to be is due to their ignoring the aforesaid distinction. Thus Aristotle's position (191b13-15) is: nothing comes to be simply (ἀπλῶς) out of what is not, but things come to be in a way (πῶς) out of what is not, viz. by coincidence (κατὰ συμβεβηκός), of attributes, that is. He repeats (191b25-26): "We have already said what it means

to say that something comes to be out of what is not: it means out of what is not *qua* something which is not (ἡ μὴ ὄν). Further, there is no violation of the Law of Excluded Middle (LEM).

In a similar vein, the notions of matter and privation (στέρησις) are treated (*Phys.* I 9) in terms of relational modes of being. In any particular case of coming-to-be, what is called the matter is a particular *in so far as*, although it does not actually possess a certain form, it is capable of adopting it, while the same particular is entitled to the term 'privation' in so far as it is devoid of this form. When we say that coming-to-be proceeds from privation, we do not mean to say that [y] proceeds from some non-existent [x], but merely that while actually being [x] it is only potentially [y]. It is precisely [x]'s not-being-[y] that is brought into focus whenever a process of coming-to-be or change is under consideration.<sup>103</sup> Thus unlike the traditional notion 'prime matter' (in either version) as an utterly indeterminate 'out of which', Aristotle's conception of matter in the sense argued for is fully in keeping with his view of potentiality (esp. in *Met.* Θ 7).

Moreover, Aristotle's analysis of coming-to-be as presented in *Phys.* I 7 makes it clear that (1) ὑποκείμεθα, instead of indicating the logical subject of predication, is always used to stand for 'to underly something to yield it the opportunity of being' or 'to be the substrate to an attributive mode of being'; (2) the relationship (implied by the terms ὑποκείμεθα and ὑποκείμενον) between what underlies and what is supported should be taken in terms of relational modes of being; and (3) there is a formal distinction between what is without being something else (οὐχ ἕτερόν τι ὄν), namely substance or subsistent being, and that which merely is (e.g. paleness) owing to something subsistent (e.g. Socrates).<sup>104</sup>

It is of special interest to notice that in Aristotle's view of coming-to-be (as in 'an uneducated man becomes educated') one and the same object (say, the man, Callias) is referred to by two different names ('man' and 'uneducated'); whereas it persists in the mode of being signified by one name ('man'), it disappears in the mode of being signified by the other ('uneducated'). Once more, what counts is accurate focalization and categorization:

*Ibid.* I 7, 189b32-190a13: When we say 'one thing comes to be out of another' (γίνεσθαι ἐξ ἄλλου ἄλλο) or 'something comes to be out of

<sup>103</sup> *Phys.* III 1, 201a9-15; 201a27-34; *Met.* Z 3, 1029a20-23; Θ 10, 1048b37-1049a3; A 10, 1075b1-6; N 2, 1089a26-31; *Cael.* III 2, 302a3-9; *GCI* 7, 324b18.

<sup>104</sup> Bemelmans, 122-33; my sections 2.17 and 4.23.

something different' (ἐξ ἑτέρου ἕτερον), we may be talking either about what is simple (τὰ ἀπλᾶ) or about what is compound (τὰ συγκείμενα). I mean that we can say: 'it is the case (ἔστι)<sup>105</sup> that a man becomes educated', and also 'what is non-educated becomes educated', or 'the non-educated man becomes an educated man'. I indicate the man involved in the process of becoming, and the state of being uneducated, and also what comes about, namely the state of being educated, with 'the simple' (ἀπλοῦν). When we say 'the non-educated man becomes an educated man', both that which comes about and what is involved in becoming are a compound (συγκείμενον).<sup>106</sup> Now in some of these cases we say, not just 'this comes to be', but 'this comes to be out of this' (e.g. the educated out of the non-educated). But this manner of expression is not used in all cases (τὸ δ' οὐ λέγεται ἐπὶ πάντων): we do not say 'the educated came to be out of a man', but 'a man became educated'. Of the simple coming-to-be things we speak of coming-to-be one remains in the process, and the other does not. For the man remains when he becomes an educated man, and persists (ἔστι), but the state of being non-educated, i.e. uneducated, does not remain, either in the simple designation [i.e. 'the non-educated' or 'the uneducated'] or in the compound one [i.e. 'the non-educated (uneducated) man'].

If these distinctions are properly observed, Aristotle continues (190a13-21), it will be clear that there must always be an underlying thing (τι ἀεὶ ὑποκείσθαι) which is the coming-to-be thing (τὸ γινόμενον), and that this is numerically (or referentially) one throughout the process, but not with reference to the form (εἶδει); 'with reference to the form' is the same as 'with reference to the definiens' (τὸ γὰρ εἶδει λέγω καὶ λόγῳ ταυτόν), he adds, for what it is to be a man (τὸ ἀνθρώπῳ εἶναι) is not the same as what it is to be uneducated (τὸ ἀμούσῳ εἶναι). That which is not one of the contrary states remains, namely the man, but the state of being non-educated and uneducated does not remain, and neither does the compound of these two, namely the uneducated man.

Also in cases of substantial coming-to-be there must be an underlying thing (190b1-10). It is in the next chapter (I 8), as we saw, that Aristotle demonstrates that when you fail to make the appropriate distinctions between the mode of being qua hypokeimenon in general and qua hypokeimenon taken as the bearer of this *or* that form, fatal mistakes are bound to occur.

<sup>105</sup> My section 2.14.

<sup>106</sup> Cf. *Phys.* I 7, 190b20-23.

12. 39 *The putative main witness for 'prime matter' in GC I 3*

In GC I 3 Aristotle deals with the material cause of substantial coming-to-be.<sup>107</sup> The first question Aristotle raises (317a32-b1) is whether there is anything that comes to be and passes away in an unqualified sense (ἀπλῶς), or whether nothing comes to be in the strict sense (κυρίως) but everything comes to be 'something and out of something' (ἐκ τινος καὶ τί), e.g. comes to be healthy out of being ill, and ill out of being healthy. In the former case, Aristotle (317b1-5) argues, there is simply generation out of what-is-not (ἐκ μὴ ὄντος) in the unqualified sense; and this means that it would be true to say that some things have the property of being nothing (ὑπάρχει τισὶ τὸ μὴ ὄν).

'To proceed out of nothing' is then qualified (317b15-18) by applying the basic distinction 'potential-actual'. In one way things simply come to be out of what has no being, in another they always come to be out of what *is*: there must always be a pre-existent something which potentially is but actually is not. And this something can be named in both ways (λεγόμενον ἀμφοτέρως),<sup>108</sup> i.e. [x] can be categorized both as being [y] and as not being [y]. The latter remark comprises an unmistakable clue to the role of focalization and categorization.<sup>109</sup>

The question discussed next (317b18-33) is whether there is a coming-to-be of individual substance (οὐσίας καὶ τοῦ τοῦδε) which must not be understood in terms of a coming-to-be out of what is modified by a certain categorial mode of being. What he is trying to say, Aristotle clarifies, is this: Will that which is merely potentially a subsistent 'this' (τὸ δυνάμει μόνον τόδε καὶ ὄν), and is not 'this' in an unqualified sense, possess size or quality or position? Too rash an answer will lead to insurmountable difficulties. Hence it is of major importance to scrutinize the 'that out of which' notion. This is where the idea of material cause comes in.

<sup>107</sup> A thorough discussion of this chapter is found in Bemelmans, 167-213; cf. Algra (forthcoming).

<sup>108</sup> Bemelmans rightly refers to *Mel.* N 2, 1089a28-30 and 1088b17-19. Cf. *Phys.* I 7, 190b25, where ὕλη ἀριθμητή is used in a similar sense (my section 12.32, p. 371, n. 57).

<sup>109</sup> Algra (forthcoming) aptly emphasizes that the crucial element in the description λεγόμενον ἀμφοτέρως is that it makes clear that we are dealing with things which may be called a μὴ ὄν. He thinks that it is legitimate to assume that the manner of expression Aristotle chooses here betrays his approach to the problem as a whole.

An aporia which brings us to the crux of the matter (ἀπορία ἱκανή) concerns the cause of the continuous process of coming-to-be, given that what passes away vanishes into what is not, and what is not is nothing; for what is not cannot have any mode of categorial being. Aristotle (317b34-318a25) argues that this continuity can only be understood if what passes away does not pass away into what is *absolutely* nothing, and that what comes-to-be materially proceeds from what passes away, and that the passing-away of one thing is the coming-to-be of another. This answer once more brings the initial problem into focus: what precisely should be understood by the expressions 'to come-to-be simply' and 'to pass-away simply'? One answer pivots around the differences between the various categorial modes of being (ταῖς κατηγορίαις): for some expressions denote things according to their subsistent mode of being as a 'this'; others bring them up according to their qualitative mode of being; and still others after their quantitative mode of being. Now in so far as things are not called up according to their subsistent mode of being (ὅσα οὖν μὴ οὐσίαν σημαίνει),<sup>110</sup> they are not said to come-to-be in an unqualified sense but only to be involved in a process of becoming *something* (319a3-14). With reference to this group, two pivotal items previously discussed are re-examined: (1) the appropriateness of the afore-mentioned opposition between actually being something and not (actually) being something but only potentially; and (2) the thesis that there is never coming-to-be out of, or passing-away into, what is absolutely nothing. This time, the indispensability should be stressed of something postulated to be underlying each and every process of coming-to-be and passing-away — something clearly marked off from the contrary modes of being involved in every process of coming-to-be and passing-away:

GCI 3, 319a17-22: Thus it has been stated how some things come-to-be in an unqualified sense and others do not, both in cases in which generic designations are used (καὶ ὅλως), as well as when the objects are denoted in what they precisely are (ἐν ταῖς οὐσίαις αὐταῖς),<sup>111</sup> and that the substrate is the material cause why coming-to-be is a continuous process in the sense that it is subject to change into the

<sup>110</sup> For the ambivalent use of σημαίνειν see my *Index*.

<sup>111</sup> The two classes were mentioned in reverse order at I 3, 317b5-7: τὸ δ' ἀπλῶς ἦτοι τὸ πρῶτον σημαίνει καθ' ἑκάστην κατηγορίαν τοῦ ὄντος, ἢ τὸ καθόλου καὶ τὸ πάντα περιέχον.

contrary states; and that in the case of substances, the coming-to-be of one thing is always a passing-away of another, and the passing-away of one thing another's coming-to-be.

In this broader doctrinal context, the question of the ontological status of matter-hypokeimenon should run: Is the hypokeimenon ultimately something which possesses no actual being whatsoever in itself, and, accordingly, is mere potentiality<sup>112</sup> — or should the entire process of generation and corruption, including the position of the hypokeimenon, be assessed in terms of relational being, and focalization and categorization, meaning that, properly speaking, being the underlying thing and the 'that out of which' is just a mode of being *qua related* to a process of generation or corruption?<sup>113</sup>

Thus taking the process proceeding from [x] to [y],<sup>114</sup> given that the hypokeimenon remains one and the same,<sup>115</sup> the problem will arise, What does this process consists in? This question is unmasked as a pseudo-problem by making the appropriate distinction. Note that this process amounts to distinguishing between two modes of being falling to one and the same substrate, namely its successive modes of being before and after the change. It will not come as a surprise that the ὅποτε ὅν device<sup>116</sup> is applied in order to mark off the substrate from the contrary states of being:

*Ibid.*, 319a33-b4: And is the matter of each <element> different, or else they would not come-to-be out of one another, that is, contraries out of contraries? For the contraries reside therein, viz. fire, earth, water, and air. Or is the matter in one way the same, but different in another? For in the state in which it [i.e. the matter] is underlying at

<sup>112</sup> Either as the hypokeimenon involved in any kind of coming-to-be and passing-away (according to the older version of the traditional interpretation, defended by Clemens Bäumer and among others Owen; see Bemelmans, 34-40), or only in so far as the generation and corruption of the four elements is concerned (among others Graham, 1987; see Bemelmans, 40-7).

<sup>113</sup> In a similar vein, the unity of proximate matter (ἐσχάτη ὕλη) and form (μορφή) is expressed in terms of act and potentiality at *Met.* H 6, 1045b17-24 (my section 10.6); cf. *An.* II 1, 412b6-9: "The matter of each thing is the same as that of which it is the matter".

<sup>114</sup> In fact Aristotle has in this context the generation and corruption of the four elements in mind.

<sup>115</sup> *Phys.* IV 9, 217a21-26; *GC* I 1, 314b26-315a3; 7, 324b6-7 (cf. II 5, 332a35); *Cael.* II 3, 286a25; *Met.* I 4, 1055a30.

<sup>116</sup> Note that the relative pronoun ὅ is to be taken as a predicate noun to the participle ὅν, and thus implements the empty container 'connotative being'. The subject should be taken from 319a33, as at 319b2-3; Bemelmans 203f.

distinct moments [i.e. as substrate]<sup>117</sup> it is the same, but in its actual being (τὸ εἶναι) it is not the same.<sup>118</sup>

Thus the discussion in *GC I 3*, instead of being *the* main support for 'prime matter' in Aristotle, instead supports the view of matter as a relational mode of being, which is treated by Aristotle in the usual context of focalization and categorization.

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<sup>117</sup> Lit.: 'for being what at certain moments it underlies' (ὃ μὲν γάρ ποτε ὄν ὑποκείται). For the attraction (the neuter participle referring to the feminine ὕλη) see my section 12.36, p. 383, n. 90. Bragues (114) renders: "Ce qu'étant à un moment donné elle (sc. la matière] gît-au-fondement, c'est la même chose". Cf. Bemelmans, 203.

<sup>118</sup> The nature of the substrate is also highlighted at *Met. Z 3*, 1029a16-26; my section 9.22.



## EPILOGUE

### MAKING UP THE BALANCE

#### 13.0 *Introductory*

In his desire to uncover the essence of genuine, unshakable knowledge (ἐπιστήμη), in particular how to find the way that leads to knowledge of being *qua* being (τὸ ὄν ἢ ὅν), Aristotle does not attempt, like his master Plato before him did, to lay the basis of human knowledge in a transcendent domain of unchanging Forms (εἶδη). Rather, he positions it in this very world.

However, as Guthrie (VI, 102) puts it, how can we bring within the compass of genuine knowledge a world of unstable phenomena, always changing, coming into being and passing away, never the same for two instants in a row? Every student of Aristotelian philosophy knows that in Aristotle's view, the trained mind is able to apprehend what presents itself to sense-perception and find in it, however unstable it is in itself, certain basic principles (ἀρχαί) which are not subject to change. To Aristotle, these principles are present *in* this world, *qua* as many immanent dynamic principles owing to which things *are* what they are. They can be thought of, however, in separation, and thus be made universal devices, and in that capacity (λόγῳ χωριστά) they are unchanging and as such the proper objects of knowledge.

Thus the very core of Aristotelian philosophizing is to look for certainty in the necessary causes of contingent beings, and at the same time not to give in to the temptation of placing them (with Plato) as universals outside the contingent world, according them separate existence, and precisely therefore the privilege of being unshakable. To Aristotle, all being is particular, in accordance with what Guthrie (VI, 103) has aptly called "Aristotle's inviolable commonsense postulate, *the primacy of the particular*". Along this firm line of thought, which forms the basic view throughout Aristotle's works, the existence of necessary ontic causes is entirely dependent on that of the particulars in which they are enmattered.<sup>1</sup>

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<sup>1</sup> *Cal.* 5, 2a34-b6 (De Rijk 1980, 40; my section 4.43; *Met.* Δ 11, 1018b36-37: "educatedness cannot exist unless there exists some *thing* educated").

A bold pronouncement indeed, but is Aristotle as good as his word? Given that the Aristotelian postulate of the primacy of the particular must operate in the context of the common Ancient concern of seeking a solid basis for genuine knowledge (ἐπιστήμη), it is understandable that a stand like Aristotle's should suffer from an inner tension caused by his retaining for the ontic cause the requirement of being somehow necessary and universal, and, none the less, sticking to the ontological primacy of the particular (my section 2.71). Could Aristotle resist the temptation to upgrade the status of the basic ontic principles, in a way similar to Plato's? To his interpreters Aristotle might more than once seem hesitant: his own language is sometimes imprecise or inconsistent enough, as Guthrie says (*ibid.*), to suggest irresolution when it comes to speaking up. Many an interpreter of Aristotle will allow Guthrie to be his mouthpiece in voicing his own experiences on this account. But Guthrie is far from despairing. Some lines further, he says that Aristotle's ontological postulate can sometimes provide the key to what would otherwise seem a difficulty or inconsistency in his thought.

How should we understand Guthrie's position? Is Aristotle's headstrong insistence on the primacy of the particular perhaps sufficient for us to kindly ignore his imprecise or inconsistent language? Guthrie's observation concerning the interpretive helpfulness of the postulate, however enigmatic his remark might seem at first glance, cannot be denied pertinence in a way. One should be more precise, however. It is not so much Aristotle's upholding the postulate itself, but rather his taking advantage of all the possibilities of the Greek language to vindicate it which provides the key to solving problems of interpretation; it is not only Aristotle's firm convictions that count but his language as well. His language and linguistic views are even of primary importance, because it is language which is the indispensable medium — for Aristotle to formulate his philosophical intentions and for us to lay hold of them.

In the concluding sections of the present study I will concentrate on the main problems resulting from the above-mentioned tension in Aristotle's philosophical attitude. This will lead us to focus on three items: (1) Aristotle's view of the task and the proper object of metaphysics, (2) the linguistic devices he has at his disposal to argue for his own metaphysical stand, particularly his rejection of Platonism, and, more importantly, (3) how to evaluate the ways in which he actually applies them to make his points.

13.1 *The unity of metaphysics*

Aristotle's ontology is based on the idea of the unity of being, owing to which a single discipline concerning being *qua* being (τὸ ὄν ᾗ ὄν) is possible. Unlike the other disciplines, which each with their own ἀρχή deal with different kinds of being (*APo.* I 28), the object of metaphysics is not *some* kind of being but 'being' primarily and simply (*Met.* Z 1, 1028a30). Along this line of thought, the eternal question about the nature of being (*Met.* Z 1, 1028b2-4: "What is 'that which is', that is to say, what is being-ness (οὐσία)?") is the central question of the *Metaphysics*.

Accordingly, Aristotle must hold on to the unity of 'beingness'. In point of fact, however, he seems to seriously undermine his own position by repeatedly claiming that what *is* is spoken of in many ways, albeit "with reference to one focal nature, not as merely by homonymy".<sup>2</sup> The question remains what precisely this focal nature consists in, which is so special as to unify the diverse meanings.

As far as the diversity involved in Aristotle's definition of the notion of 'be' is concerned, one should primarily have in mind the two different domains covered by what Aristotle calls 'first philosophy'. Guthrie rightly speaks (VI, 132f.) of two branches of Aristotle's first philosophy. (1) First philosophy tries to discover what in the world around us can properly be called 'being'. In keeping with the basic line of thought presented in *Cat.* 5, in *Met.* Z 2 too beingness in the sense of 'subsistence' is attributed to all kinds of corporeal, physical objects like plants and animals and their natural parts, the four elements and their productions, including the heavenly bodies. All these objects *are* in virtue of their beingness. (2) Apart from the aforesaid kinds of objects, which all contain a material component, i.e. unrealized potentiality, first philosophy also has to find out, Aristotle knows (*Met.* E 1, 1026a10-13; 27-32), whether any being exists that is pure actuality, unencumbered with matter. If there is, incorporeal entities will be the proper objects of first philosophy, since they will be representative *par excellence* of beingness. Given that first philosophy has the pure beingness of the incorporeal, unmoved objects as its primary object, it cannot come as a surprise that as far as the corporeal, mobile domain is concerned, it is beingness as such,

<sup>2</sup> *Met.* Γ 1, 1003a33-34; E 2, 1026a33-34; 4, 1028a5-6. Cf. A 9, 992b18-19; K 8, 1064b15; N 2, 1089a7 and 16; Δ 8, 1017b23-26 (about οὐσία).

unencumbered with the matter in which it is in fact invested, that will be at the focus of the metaphysician's interest.

Thus the close relationship between the two provinces of first philosophy is in principle clear enough. None the less it remains to be seen whether Aristotle has good reason to speak of ontology as one single discipline. Ackrill (1981, 119) is of the opinion that Aristotle's attempt to bring together two different conceptions of first philosophy does not seem successful. For although God may indeed be the ultimate cause or explanation of all natural objects and changes, it does not follow that knowledge of god will *include* knowledge of such objects and changes, or that it is up to theology *itself* to study the attributes of being *qua* being. Ackrill has surely made his point in so far as the clarity of Aristotle's argument is concerned.<sup>3</sup> I think, however, that the only thing Aristotle has in mind is the formal issue of the universal nature of beingness. It is indeed beingness (οὐσία) that turns out to be the focal point with reference to which everything, whether corporeal or incorporeal, is said to *be*.<sup>4</sup>

As we saw before (my sections 1.5-1.6), Aristotle's notion of 'be' (εἶναι) is, in accordance with common Greek, one: every instance of 'be' is *au fond* what we have termed 'hyparctic', that is to say, in all its conceptual differentiations, 'be' means 'being given', 'somehow being there'. It is true that beingness is captured in its purest form in the theological domain in which it is found — as it were, *in vitro* and *par excellence*. That makes it beneficial to take a special interest in beingness as invested in the theological domain. But this observation should not lead us astray as far as the unity of metaphysics is concerned; for although the theological domain can be viewed as privileged, this very privilege is concerned with what the two domains have in common, 'being-ness', which is pure indeed in the theological area, and can be mentally purified or logically 'universalized' as occurring in the sublunary world.

### 13. 11 *The unicity of hyparxis*

So far we have established the unique focal meaning of 'be' ('beingness') as hyparxis. However, the notion 'be' is diversified in Aristotle

<sup>3</sup> In fact, the question of where the proper object of metaphysics should be found was a hot issue among the Latin and Arab thinkers of the Middle Ages. See A. Zimmermann (1965; <sup>2</sup>1998), *passim*.

<sup>4</sup> Bäck (2000), 270.

in several ways, which at face value may seem to threaten its unicity and the unity of metaphysics as well.

Firstly, the general notion of *hyparxis* can feature in either an intensional or an extensional context. From the intensional point of view, *hyparxis* bears on a thing's immanent cause of 'being there'. In this capacity, beingness is implemented — empty as it is by itself — by forms of categorial being, and is, accordingly, connoted by a categorial modification; hence intensional 'be' can also be called 'connotative' (my section 1.64). Taken in this intensional sense, the empty container 'be' is considered by Aristotle the basic element that underlies any mode of categorial being, coincidental modes as well as the substantial one, which enables them to exist. But the notion 'be' does not by itself include factual<sup>5</sup> existence in the outer world; hence I speak, in the case of connotative (or intensional) being, of weak *hyparxis*.<sup>6</sup>

When taken extensionally, or in its referential capacity, *hyparctic* 'be' refers to particular instantiations of categorial beingness, including the particular instances in which they are enmattered.<sup>7</sup> In this referential capacity, 'be' is concerned with the factual (or supposedly factual) existence of the categorial modes of being ('instantiations'), including the particulars (instances) factually satisfying them. Particularly as far as the latter are concerned, I speak of strong *hyparxis*.

There is yet another diversification more prominent in Aristotle's philosophy. It is effected by the well-known distinctions 'essential' vs. 'accidental being', 'being qua true' vs. 'non-being qua falsehood', 'being according to the different figures of appellation',<sup>8</sup> 'actual vs. potential being' — the distinctions, that is, by which Aristotle

<sup>5</sup> For my contrasting 'factual' with 'actual' see my *Index*, s.vv.

<sup>6</sup> I prefer the term '*hyparxis*' to 'existence', because by extending the latter term to apply to intensional entities in their capacity of psychic entities as well, one could be easily led astray by merely taking them according to their factual presence in our minds, like feelings of fear or joy, instead of examining them in their significative capacity. It should be recalled that, in the opening chapter of *De interpretatione*, it is precisely because of their significative nature that the "affections of the soul" are contrasted with their merely being psychic things, which are the subject-matter of Aristotle's book *On the soul*.

<sup>7</sup> See the semantic Main Rules discussed in my sections 1.71-1.73.

<sup>8</sup> Bäck (2000, 270f.) explains the Aristotelian procedure of dealing with the problem "how there may be a single science of being if being is said in many ways" in terms of his aspect theory of predication, adopting 'predication' in the customary sense of sentence predication. As we shall see presently, any idea of 'sentence predication' can only lead us into difficulties quite alien to Aristotle's view of the matter, like those caused by the *unAristotelian* distinction between 'natural vs. unnatural predication'.

implements his adage about the multiple senses of 'be'. If these distinctions should imply the existence of different kinds of being objectively represented by the inhabitants of the Aristotelian ontological domain, there can no longer be any question of the unity of being at all, nor of the possibility of metaphysics as one unique discipline, so eagerly argued for by Aristotle in *Met.* E 2 (my section 7.32).

### 13. 12 *Ontological unity vs. logico-semantic diversity*

In point of fact, however, unicity is salvaged, because the aforesaid distinctions primarily concern *our* different logical approaches to the multiple ways in which unitary things can be regarded to possess beingness. Thus the λέγεται ('is said') in the formula πολλαχῶς λέγεται should be taken very seriously, to the letter indeed. No doubt, to the 'realist' philosopher Aristotle was, the several differentiations of being signified by our distinctions match ontological articulations found in the objects apprehended by sense-perception; they are, as it was said later on, 'cum fundamento in re'. None the less, any differentiation as actually made by us depends on mental operations, consequential as this process is to our inborn habit of sensorily or intellectually differentiating what is ontologically undivided.

Whenever, in his search for true ousia, Aristotle gives preference to the categorial modes of being over the lower types of being which are discussed and dismissed in *Met.* E 2-4, it is the first category of substantial being which is at the focus of interest, simply because it is the one representative of beingness *par excellence*, namely subsistence and self-containedness.<sup>9</sup> However, even when you give preference to the object's subsistent mode of being over the non-substantial ones, your approach is no less interfering in Reality than when one of its non-substantial modes is focussed upon. Aristotle too is fully aware of this, because he is familiar with the *condition humaine*, which involves our fragmentary manner of perceiving things.<sup>10</sup> At the same time he never tires of hammering into his audience that whatever *is* exists as

<sup>9</sup> E.g. *Met.* Z 1, 1028a10-20; my section 9.1.

<sup>10</sup> In particular, the expositions in *An.* II 6, which is about the three types of sensible object, — two perceived *per se*, and one coincidentally — testify to Aristotle's awareness of our fragmented manner of perceiving things. Despite the unitary character of the material objects of the outer world, there are different formal objects of the five senses (colour, sound, flavour etc.), alongside common objects of sense (the coincidental ones), which too concern specific aspects of things (movement, number, shape etc.); see also *An.* III, 1.

something one, something self-contained, bearing its ontic causes within itself, namely, immanent particular forms which *together* make up this or that individual.<sup>11</sup>

All things considered, it is precisely the oneness and self-containment of anything existent which is mirrored by the unique notion of 'be' — the one, that is, which we have termed 'hyparxis'. This unicity is not endangered at all by the multiple ways in which 'be' is *brought up* — i.e. in which we are accustomed to bring up whatever presents itself to the senses.

The same applies to the aforesaid semantic bifurcation 'intensional vs. extensional', because this distinction equally depends on mental operations, to wit, the twofold way in which we can bring the object's beingness into focus. That this differentiation too is merely a matter of our way of *regarding* things is plain from the fact that it pervades the whole range of compartmentalizations conveyed by the aforesaid distinctions implementing the *πολλαχῶς λέγεται* adage:

— 'Categorical being': In the man, Callias we can (1) intensionally focus on the substantial mode of being, namely, the instantiation of 'manhood' in virtue of which he is this individual man, or (2) focus on it extensionally, taking it as informing the subsistent instance, man. The same holds for non-substantial modes of categorical being, such as considering (a) the form paleness inhering in Callias, or taking (b) the instance Callias qua informed by paleness.

— 'Essential vs. coincidental being': Note that in the previous items and the distinction *καθ' αὐτό* vs. *κατὰ συμβεβηκός* is invested, a distinction which is entirely a matter of appellation or 'bringing things up'. For instance, we can take the same man, Callias, either as a subsistent being by calling him 'man', 'animal', 'biped', and so on, or in his capacity of instancing, say, the coincidental mode of being, paleness, calling him *τὸ λευκόν*.<sup>12</sup>

— 'Being qua being true' (as opposed to 'non-being qua falsehood'): As we saw in the sections 8.4-8.5, these types of being are, qua compound significates ('states of affairs'), merely mental constructs concerning real being as signified by expressions of categorical being. These states of affairs (*πρᾶγματα*), then, can be taken either inten-

<sup>11</sup> This 'intensional' oneness, which perfectly matches beingness, is discussed in my sections 9.34-9.35.

<sup>12</sup> It cannot be overstressed that the usual way the interpreters talk about Aristotle distinguishing between 'essential' and 'accidental' being as though there is talk of two ontological domains is utterly confusing. See my next section.

sionally, to wit as the semantic values of the compound expressions, or extensionally, referring to the real states of affairs the significates apply to. Non-being qua falsehood is the mental construct signifying a state of affairs that does not apply to the outer world. A false state of affairs can be denied of a real one, and the latter, accordingly, can be referred to as an instance not satisfying the false state of affairs, in a way similar to how a man can be referred to as an instance of 'non-stone' or by any other infinitated expression, which, by definition, may denote a wildly various range of objects (my section 3.25).

— 'Actual vs. potential being': Plainly this distinction is concerned with modes of categorial being. Intensionally, any (chunk of) stone can be taken to satisfy actual 'stonehood' and potential 'statuehood'; extensionally, this or that (chunk of) stone can be referred to as e.g. a potential statue of, say, Caesar.

The question remains whether in actual practice Aristotle's expositions are up to the task of respecting the integrity of the self-contained, subsistent entity. This question divides into two sub-questions: (1) Can his method, his semantic tools and devices in particular, as such do the job? and, more importantly, (2) Does Aristotle apply them convincingly?

### 13.2 *The method: focalization and categorization*

Bäck (2000, 270) is right that Aristotle has a compartmentalized approach where he deals with the various aspects in which something is said to *be*, "and with aspects of those aspects, and even with aspects of the aspects of those aspects". In all this multiplicity, he continues, we might wonder where to find the unity of science, just as we might worry where to find the unity of predication when statements assert that the subject *is* in various fundamentally different ways. This much is certain, our speaking about the things-there-are (τὰ ὄντα), focusing on still different modes of being of objects under examination, must raise the question whether language is well-equipped to express our thoughts about what-is (τὸ ὄν) adequately, without jeopardizing, that is, the unitary nature of the self-contained things. Bäck rightly takes this question to basically concern the unity of (in his words) 'science' and 'predication'.

To answer this pivotal question requires a clear understanding of what we should understand by 'speaking about things'. In line with



one of the fundamental positions endorsed in the present study, I shall argue that the basic mental activity involved on this score should be taken in terms of onomastics ('naming', 'appellating'), rather than, as is commonly done, in terms of apophantics ('sentence predication' and 'statement-making').

### 13. 21 *The usual apophantic approach*

Bäck is of the opinion that at any rate Aristotle himself does not worry about the problem where, in all this multiplicity, to find the unity in speaking about things, and believes that Aristotle's approach follows, or perhaps mirrors, his doctrine about the unity of 'predication'. Even though the categories represent ten fundamentally different types of predication (in Bäck's terminology), there is still a unity of predication, since — especially on Bäck's view of Aristotelian statement-making — any affirmative predication of being καθ' αὐτό makes a fundamental assertion of real presence, which can be specified by one of the categories, "the figures of predication" (*ibid.*).

As can be expected, Bäck has sentence predication in mind, not naming (or appellation). Explaining the actual procedure of Aristotle's ontological investigations in accordance with the (supposed) structure of predication, Bäck needlessly complicates matters, it would seem. Aristotle's approach has nothing to do with 'predication' in the sense in which we use the expression today; and modern interpreters' devices like 'accidental predication' and '(un)natural predication' — which, admittedly, seem to be at variance with the unitary nature of things — are completely alien to what Aristotle has in mind when he discusses the problems surrounding the unity of being and the unicity of beingness.<sup>13</sup>

The impact of Bäck's approach to the matter becomes clear from his comments (2000, 186) on *APo.* I 18, 81b22-29, in which he had already expounded the problem of multiple 'predication'. It is interesting to see that there he in effect comes close to explaining things

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<sup>13</sup> It is most significant that various discussions of these modern tools with respect to Aristotle are of no help at all, and often lead to accusing Aristotle of being disorganized. E.g. Lewis (1991, 108ff.) speaks of "some troublesome principles in the *Topics*". Weidemann (*Historisches Wörterbuch der Philosophie* ed. J. Ritter & K. Grunder VII [Basel 1989], 1107 *s.v.* 'Prädikation') holds that Aristotle confuses essential and accidental predication with natural and unnatural predication. In point of fact, it is the interpreters who are confusing things, viz. naming and predication, and semantics and syntax.

in terms of denotative appellation ('naming'), instead of sentence predication:

"The man is white' is a case of accidental predication; 'the white is a man' is a case of something else. I shall call it 'predication *per accidens*', which in any case is a calque of κατὰ συμβεβηκός, or 'unnatural predication', in line with Aristotle's remark. As in *On Interpretation* 7, it is not clear whether Aristotle himself is allowing predications of singular expressions. He does state that singulars are not predicated "truly and universally" [43a26]. Well, they are not predicated universally, i.e. of more than one subject. Hence they cannot be predicated both truly and universally. But can they be predicated truly? He does say that singulars may not be predicated of *others* [43a40]. Well sure, for then they would be predicated of more than one subject and be universal. But may they be predicated of one subject, that is, of one name and one object, regardless of how many expressions give the name? Aristotle gives no reason to suppose otherwise. He does say that a singular term is not predicated of anything "naturally",<sup>14</sup> but only *per accidens*. So Aristotle does not in general reject the predication of a singular term of a singular subject".

In point of fact, there is no need to worry about such things: singular expressions can be used to *indicate* objects; and if they do, they do not apply to other things. In other words, like other texts, *APo.* I 18, 81b22-29, should be interpreted in terms of (semantic) appellation, not (syntactical) predication. It is pertinent to notice that *pace* Bäck and others, Aristotle himself never uses such labels as 'natural' or 'unnatural' with reference to the attribution of terms.<sup>15</sup>

### 13. 22 *Does the onomastic approach salvage unitary being?*

What to say about focalization and categorization in this respect; do *they* not affect the ontic integrity of the objects they refer to in a way similar to how sentence predication does? Let us recall first what focalization and categorization are all about. To Aristotle, the self-containing unity each particular subsistent being is, is made up of various modes of being, viz. the subsistent mode accompanied by a

<sup>14</sup> Note that this term is not found in Aristotle's text.

<sup>15</sup> Bäck's remark (2000, 186) that "Aristotle reaffirms the doctrine of unnatural predication in discussing substance" in *Cat.* 2, 1b3-5 and *Met.* Z 1, 1028b36-37, finds no support in the texts. As always, the discussions there concern the use of categorical expressions taken qua names, rather than predicates. It is pertinent that the terms 'essential vs. accidental predication', and '(un)natural predication' did not come into use until the Ancient and Medieval commentary tradition, and in fact imposed themselves, once the semantic procedure of naming was muddled with the syntactical device of predication.

number of coincidental, non-substantial modes. Given the mode of being that is pivotal to the discussion at hand, the investigator focuses on this particular mode, and proceeds to categorize the object accordingly, in order to make his point, by adhibiting the *qua*-procedure (my section 2.7). For instance, if Callias's behaviour towards his slave Callicles is at issue, Callias is not brought up in his capacity of man or animal, nor as a musician or grammarian, but *qua* master of his slaves: in the latter capacity the relationship 'master-slave' is essential or  $\kappa\alpha\theta'$   $\alpha\upsilon\tau\acute{o}$  (my sections 2.6-2.7). One might wonder, then, whether the differentiation between the object's modes of being and, on occasion (see our previous example) even our elevation of a non-substantial mode of being ('masterhood') at the cost of the substantial one ('manhood'), will not endanger our perception of the object's ontic unity. The underlying problem is often presented as an issue of great philosophical importance. It is, for instance, precisely with reference to Ammonius's treatment of *Cat.* 7, 7a35-39, that his translators, Cohen and Matthews raise this question. Their translation of Ammonius's comments, which runs

Moreover, it is not surprising that he [Aristotle] says these [viz. 'being a biped', 'being capable of knowledge', 'being human'] are accidents. For he does not mean accidents in an absolute sense (*haplôs*), but rather things which would be accidents with respect to the relation of slave and which would be predicated <of the master> secondarily, whereas by nature it is the master <who is predicated> primarily and with respect to himself,

is annotated thus (p. 86, n. 105):

"A few lines below, Aristotle writes: 'if everything accidental to the master is taken away (such as his being a biped, capable of knowledge, human) and all that is left is that he is a master, the slave will always be said to be a slave in relation to that' (7a35-39). Ammonius is clearly, and rightly, puzzled when Aristotle calls such predicates as *human* and *biped* 'accidental to the master', for he knows that in Aristotle's view these are *essential* characteristics of the man, who only happens ('by accident') to be a master. His solution is to say that Aristotle does not mean that being human is in any absolute sense (*haplôs*) an accidental characteristic, but that it is accidental with respect to someone specified as a *master*, and is a *secondary* predicate of the master so specified. Presumably he thinks that being human is an essential characteristic of those things of which it is a *primary* predicate. Thus, the fact that being human is an accidental characteristic of a master (so specified) can be handled as a special case, in which it is considered in relation to a subject of which it is a secondary predicate. 'By nature', Ammonius concludes, it is *master* that is predicated 'primarily' of the master so specified".

Cohen and Matthews are of the opinion that Ammonius has made a good point, but was unable to deal with it satisfactorily:

“Ammonius has, in effect, raised (but failed to grasp firmly) an issue of great philosophical importance. For if human, like master, can be essential to something under one description but accidental to it under another description, the entire distinction between essential and accidental predicates is threatened with relativization. Whether a predicate is essential or accidental, it might be argued, will always depend on the way its subject is specified, and there will thus be no such thing as what is essential or primary ‘by nature’ in any absolute sense. (Ammonius’ confidence that Aristotle’s doctrine of essences is not threatened by the concession in the text seems excessive).”

Their conclusions about Aristotle and Ammonius are entirely beside the point. To Aristotle, there *are* such things as what is essential or primary ‘by nature’ in an absolute sense: it is that which is given in answer to the *unqualified* question for an object’s quiddity (τί ἐστὶν ἀπλῶς).<sup>16</sup> In this case the question is indeed answered by bringing up the object’s subsistent quiddity or essential nature, to wit his manhood, leaving aside his being someone’s master and all other non-substantial modes of being. ‘Accidental’ properties are only considered essential with reference to cases in which the τί ἐστὶν question is *modified* by our picking out a coincidental property for the sake of a certain discussion, in which an attribute is under examination which has an essential relation to this coincidental property of the object. It is all a matter of argument. Unlike his translators, Ammonius has grasped Aristotle’s point perfectly, and they wrongly say that Ammonius is clearly puzzled; he is not puzzled at all, for he *expressis verbis* writes that it is not surprising that in the given context Aristotle calls the essential features ‘accidental’ (συμβεβηκότα).

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<sup>16</sup> In such cases the object is brought up (‘specified’) under its most appropriate appellation, not under a coincidental mode of being, and an object’s most appropriate designation is the one representative of its subsistent mode of being. Bäck (2000, 17) is wrong in explaining Aristotle’s remark that Callias is Callias καθ’ αὐτό, in terms of sentence predication, saying that “this statement seems to insist that Callias exists independently, as a primary object in his own right, and not as a secondary entity, arising, say, from the interweaving of Platonic Forms. At any rate, here Aristotle seems to be predicating a singular substance [...]. Too, ‘καθ’ αὐτό’ suggests that Aristotle is making a remark about the predication. So he might be mentioning and not using a predication of singulars”. In fact, (1) Aristotle is not talking about ‘predication’ at all; what he intends to say is that if Callias is brought up as ‘<the man> Callias’ there is a case of essential designation, not a designation according to one of his coincidental properties (κατὰ συμβεβηκός); (2) The way in which Callias exists is not at issue here either, let alone that there is any allusion to Plato.

Part of the moderns' problem is, once again, their speaking of 'essential vs. accidental predication'. Having sentence predication in mind instead of naming, these commentators assume that in *naming* (Cohen and Matthews aptly speak of 'specifying') Callias 'a master', and, in the special context of the relationship to his slave Callicles, taking Callias's masterhood as essential and, quite consistently, his being human as 'coincidental', Aristotle claims at *Cat.* 7, 7a35-39, that Callias *essentially* — this word taken in an absolute sense (ἀπλῶς) — is a master, and that his being human belongs to his accidental properties. In their view, Aristotle states that Callias, in an unqualified sense, is *essentially* a master. But all Aristotle has in mind is that if it is the relationship to his slave we are talking about, the correct appellation for Callias is 'master'; indeed in this case that name is the essential one. Aristotle would not dream of *asserting* in an unqualified way that Callias's being human is inessential to him.

It is noteworthy enough that Cohen and Matthews's terminology suggests that they too are in fact thinking of naming instead of predicating: they call the 'predicate' assigned to an object according to its subsistent mode of being 'primary predicate',<sup>17</sup> contrasting it with the designation assigned to the object according to a non-substantial mode, which they call 'secondary predicate'. Along a similar line of thought, they aptly speak of *specifying* the subject, which equally points in the direction of naming and designating for the sake of denotation, rather than statementally predicating.

I cannot see why the distinction between essential and accidental 'predicates' (their label) should be threatened with relativization, since in fact to Aristotle, 'being essential' is not merely a matter of how you are approaching things. As we saw already, Aristotle does recognize *essential* characteristics of things, which emerge if the τί ἐστὶ question is asked in an unqualified sense. It is only in the strategy of argument that essential features can prove to be less relevant ('inessential' indeed) to the special point under discussion (my sections 8.22-8.23).

If we interpret Aristotle's accounts in terms of naming and categorization, any misunderstandings such as the ones brought on by the 'predicationists' are prevented. If one brings Callias up as '(this) master', and purposely not as '(this) man', there is an unequivocal

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<sup>17</sup> It is quite acceptable to speak of 'predicate' as long as this label is taken semantically (= 'name'), not in the syntactical context of sentence predication, as Cohen and Matthews and all other modern commentators do.

and harmless denotation of the man Callias, without any suggestion that his being human is an inessential feature of his, not belonging to his individual nature. More significantly, naming (appellation) has as such nothing to do with truth. Suppose, A is held by B to be a person who criticizes and reproves with unsparing severity and frankness (and, by preference, without being asked), while others regard him as a modest, mild and tactful critic. Now when A enters the room, and B with a look of disapproval says 'This guy is a real Dutch uncle', the others will deny it: 'No, this is not true!'. But if B sneers 'There he is, our Dutch uncle!', they are entitled to protest, but cannot disclaim it as not being true, because A *is* entering the room. From the viewpoint of semantics, to call ('bring up') someone (as) 'an *F*-er' is quite a different thing from explicitly saying that he is an *F*-er.<sup>18</sup>

Incidentally, the logical analysis of statements in terms of accidental vs. essential, or of (un)natural predication has from the semantic point of view, a peculiar weakness in itself, quite apart from its being anachronistic as far as Aristotle is concerned. On this analysis, unlike 'The Dutchman is mortal', statements like 'The Dutchman is niggardly' are held to be cases of 'accidental predication' (just as 'These niggardly guys are, of course, Dutch' is a sample of 'unnatural predication'). However, whoever claims that the Dutch are niggardly, will rightly deny that he is merely referring to an accidental property of Dutch people: he clearly (and rightly, I am afraid) views this property as characteristic ('essential') of them.<sup>19</sup> Now by taking such utterances in the semantic terms of naming and specifying the object, and thus as functioning denotatively, instead of considering them in terms of syntactical assignment ('predication'), the problem can be nipped in the bud by using the Aristotelian *qua*-procedure: 'The Dutchman is *qua* being Dutch niggardly'.

Let me conclude this discussion with stressing a most unfortunate sequel of the 'accidental vs. essential predication' issue. If things are put this way people will easily be led to believe that Aristotle's onto-

<sup>18</sup> Cf. Donnellan (1977), 46-51. Compare also what I have termed 'stratificational semantics', meaning that using a common term denotatively, different 'strata' or levels can be dominant in designating the referent; De Rijk (1981), 48-52.

<sup>19</sup> He may feel supported by English idiom: 'Dutch metal', 'Dutch gold', 'Dutch treat' and 'to go Dutch'; 'Dutch bookmaker'. Cf. 'Dutch auction'; 'Dutch courage'. He will also welcome 'Dutchman' in the sense of 'a piece of wood or metal etc., used to repair, patch or conceal faulty workmanship'.

logical picture comprises accidental alongside essential *objects*, as though these two types of inhabitants make up his ontological domain, and objects can be identified as belonging to either the class of 'essentials' or 'accidentals'. If this were the case, Aristotle would have disastrously failed to distance himself from Plato's doctrine of the transcendent Forms. In point of fact, however, the basic anti-Platonic tenet of Aristotle's philosophy is that any 'object' presented to sense-perception is a self-contained individual, composed of a substantial form and a gamut of 'accidental' modes of being, such that none of its components is by itself a substantial or accidental 'object', and each and every object is a compound of coinciding modes — one the subsistent form,<sup>20</sup> the others accidental ones. In this respect, *any* object is an 'accidental' compound. Whenever objects like 'pale musician' are regarded by Aristotle as 'accidental unities', they are so indicated from the semantic point of view. In point of fact, one and the same person, Miccalus, who is designated (e.g. *APr.* I 33, 47b30ff.) coincidentally (κατὰ συμβεβηκός)<sup>21</sup> by the expression 'pale musician', is when taken 'per se' (καθ' αὐτό) or 'essentially', adequately designated as 'human being'. It is all a matter of designation: speaking of Miccalus, there is no 'accidental object', pale-musisian, alongside the 'essential object', man.<sup>22</sup>

To put it briefly, the labels 'essential being' and 'accidental being' are misnomers. Likewise, at least as far as Aristotle is concerned, the distinction 'accidental vs. essential predication', and its companion 'natural vs. unnatural predication', including their sequels 'accidental vs. essential objects', lack authority. Sadly, these distinctions have never stopped interpreters from concocting unclear and obviously unsatisfactory expositions of Aristotelian doctrine, and blaming Aristotle for inconsistencies.<sup>23</sup>

<sup>20</sup> Understandably, most of the time subsistent forms are not indicated as 'coincidental', but in principle, they may be regarded as 'coincidental' with reference to a non-substantial form, such as at *Cat.* 7, 7a35-39, discussed above. Note that often a non-substantial form is taken to 'coincide' with its fellow non-substantial forms as well, as e.g. 'pale' with 'musician' in the designation 'pale-musician'.

<sup>21</sup> Guthrie (VI, 121) aptly paraphrases the labels 'per se' and 'per accidens' in terms of differentiated designation depending on either focussing on a coincidental mode of being or the subsistent one: "The force of the phrase κατὰ συμβεβηκός, here rendered by its Latin equivalent, is literally 'in virtue of a concomitant', as opposed to καθ' αὐτό, essentially, in virtue of a thing's own nature". Guthrie rightly speaks in this context of 'qualification' or 'characterization' of an object.

<sup>22</sup> A special case of designating things is found in the use of 'accidental not-being' for στερήσις; Guthrie VI, 121-3; 210.

<sup>23</sup> Confining ourselves to some contemporaneous samples, Ross (1949, 577)

### 13. 3 *Focalization and categorization in practice* *Is Aristotle an 'astonishing man'?*

Does Aristotle apply his method and devices convincingly? Let us take some salient samples of the strategy of argument he presents where he tries to uphold his philosophical position vis-à-vis Plato's. To assess the issue properly it will be most useful to begin with the way in which one of the finest interpreters of Aristotle, W.K.C. Guthrie brings his evaluation of the Stagirite to the fore; his unconcealed admiration for Aristotle seems to ring with irritation about the man's way of arguing. Let Guthrie be his own mouthpiece. With reference to the flexibility of Aristotle's language, which makes it a wonderful instrument to deal with intricate philosophical questions,<sup>24</sup> Guthrie writes (VI, 216):

"[...] hardly surprisingly, specific form, the essence of individuals [...] is endowed in the *Metaphysics* with the titles reserved in the *Categories* and elsewhere for the true individuals – Socrates, Coriscus, *this* horse. [...] The title of 'a particular "this" (τόδε τι)', elsewhere jealously re-

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comments upon *APo.* I, 22 are simply baffling: "As a logical doctrine this leaves much to be desired; [...] all these assertions are equally genuine predicates, and [...] in particular it must be admitted that A. is to some extent confused by the Greek usage — one which had unfortunate results for Greek metaphysics — by which a phrase like τὸ λευκόν, which usually stands simply for a thing having a quality, can be used to signify the quality; it is this that makes an assertion like τὸ λευκόν ἐστὶ ξύλον or τὸ μουσικόν ἐστὶ λευκόν seem to A. rather scandalous". About 83a36-b12 Ross judges (578): "[...] a passage whose connexion with the general argument is particularly hard to seize; any interpretation must be regarded as only conjectural". Also Ross's view of 'essential being' in (<sup>2</sup>1953) I, 306-8 on *Met.* Δ 7 can be mentioned. (Although it is rightly criticized by De Rijk (1952, 36-43), in that study too much unclarity remained). Barnes's remarks (1971, 113-21) on the same chapter, including the sophisticated distinction between 'I-predications', 'I1 predications', 'I2 predications', 167-73 can also be referred to in this context; he writes (173) "None of the arguments in A 22 is successful; and they cannot be reformulated in such a way as to furnish a proof of Aristotle's contention". (Note that they *can* be reformulated in terms of naming and categorization; see my section 6.39). Compare also Detel's comments on *APo.* I, 22. As for the distinction between 'accidental being' vs. 'essential being', both erroneously taken in an absolute sense, see e.g. Lewis (1991), *passim*, including his discussion of 'accidental compounds' as 'per accidens beings' (esp. 85-149), and his talk of 'accidental or unnatural predication' as contrasted with 'genuine metaphysical predication', where the latter is opposed to 'linguistic predication' (*passim*, esp. 152-8). This line of thought culminates in scholarly discussions about 'accidental compounds' as "kooky objects"; Matthews 1982, *passim*; cf. Lewis, 88, n.1.

<sup>24</sup> Guthrie VI, 218, n. 2: "The untidiness of his language may annoy, but on the other hand its flexibility makes it a wonderful instrument compared to the resources of his predecessors including Plato. *Aponiai* that baffled them dissolve and vanish in the face of his 'in one sense ... but in another'."



served for the concrete object, is now transferred from the empirical to the scientific or philosophical unit, the specific form, which as essence usurps also the title of 'primary being'".

Referring to *Met.* Δ 8, 1017b25-26, Θ 7, 1049a34-36 and *PA* I 4, 644a30-32, Guthrie comments (*ibid.*, n. 1):

"[...] he (Aristotle) calls what is ἄτομον τῷ εἶδει a καθ' ἑκάστων. [...] At the same time this astonishing man can identify εἶδος as subject of definition with τὸ καθόλου ! (1036a28-29). Seen in one light it is individual, in another universal".

When Aristotle's view of matter is examined, it is remarked upon that (VI, 210):

"[...] he says (1036a8-9), matter is by its nature unknowable. This does not prevent our philosopher, with his incorrigibly one-track-at-a-time mind, from saying in the next book (1042a32): 'That matter too is substance is obvious', on the grounds that it underlies and persists through every sort of change".

With regard to this incorrigible trait we read (VI, 212, n. 3):

"A.'s indifference to the effect of his language never ceases to shock. Even τόδε τι, his favourite expression for a physical unit or individual, can be applied in this comparative way to (of all things) ὅλη. It is τόδε τι μᾶλλον when contrasted with στέρησις (*Phys.* 190b23-28). When he chooses to speak more precisely it is potentially a τόδε τι. At *De an.* 412a7 he says there are three kinds of οὐσία: 'matter, which by itself is not a particular "this", shape or form, in virtue of which it is called "this", and thirdly the product of the two'."

When he deals with the intricate puzzle of the relation of Platonic Forms to particulars, Guthrie remarks in connection with the different positions of Plato and Aristotle, how Aristotle tries to uphold his lore of the 'universal', not eschewing insouciant manners of expression (V, 414, n. 1):

"His insouciant use of language is full of traps for the unwary. He can apply the term τόδε τι (individual) to specific nature or form (*Metaph.* 1070a11, 1042a29, 1049a35). At 1039a14-23 he sees the difficulty".<sup>25</sup>

Undeniably, Guthrie has well observed the core of Aristotle's general strategy of argument, and also appreciates his changes of viewpoint for the sake of argument.<sup>26</sup> The challenge is, however, to assess and

<sup>25</sup> For the general topic of Aristotle's obscurity see my section 1.22.

<sup>26</sup> E.g. VI, 216: "It is not so much that the perceptible substance has yielded first place to its form. Rather as he says in this book [*Met.* Δ 8, 1017b23-26], the form is the individual; and we can sympathize with his change of viewpoint when we

to legitimize Aristotle's peculiar strategy in the broader context of his semantics.

To Aristotle, as to any Greek philosopher of the Socratic tradition, it is of pivotal importance to distinguish between an object as a whole and its intrinsic ontic cause. It is the status of the latter that is at the philosopher's focus of interest. Even he who does not, like Plato, reduce the immanent cause or form to a transcendent Form beyond the range of particular being, and thus happily escapes apories as brought forward in *Met.* H 6, 1045 b7-16 about notions like 'participation', 'communion', 'connection', or 'combination', still has to explain the relationship between the particular and its ontic cause. Aristotle (*Met.* B 4, 999a24-25) has good reason to deem this puzzle "the hardest and most urgent of all problems", since to reject transcendency is not the panacea. Guthrie aptly describes elsewhere (V, 414) Aristotle's position as that of a "Platonist without the transcendent Forms". These he could not stomach, but he inherited from his academic training, Guthrie goes on, a sense of the supreme importance of form, which he never abandoned. Aristotle started from the common-sense premiss that only particulars — *this* man, *this* horse — have full existence, or as he puts it (*Cat.* 5, 2a11-14), are *ousiai* in the primary sense, whereas universals have no independent existence. None the less the notion of universals or forms — and speaking generally, conceptual analysis — is indispensable if we are to come to a better understanding of the concrete particulars: we have to acknowledge this time and again.<sup>27</sup>

Thus Aristotle has to clarify the distinction between 'universal form'<sup>28</sup> and 'thing' without making them separate, as Plato does. To this end, Aristotle argues that however formally different form and thing are, they materially or referentially coincide with a particular being (my section 9.4). Arguing for his position, he makes use (in *Met.* Z 6) of the semantic ambivalence of the term οὐσία, standing for both quiddity and substance, i.e. both beingness and that which

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remember that his present aim is to discover how far the individual can come within the purview of the philosopher or scientist".

<sup>27</sup> See the lucid exposition of Aristotle's problem in Guthrie V, 414. The most impressive samples of conceptual analysis are found in the *Metaphysics*, e.g. Z 11, 1036b23-1037a10 (the art of ἀφαίρεσις) and 12, 1037b28-1038a36 (the search for the ultimate differentia); Z 17, 1041a11ff. (conceptual articulation); H 6, where the counterpart of analysis, conceptual 'oneness' is dealt with.

<sup>28</sup> It is very pertinent that the universality of the Aristotelian form merely consists in its universal applicability.

possesses beingness *par excellence*, namely subsistent being.

As long as objects are called up by their primary name(s), there is no problem at all; then the aforesaid coincidence is unmistakable: a man (animal, biped) is *per se* (καθ' αὐτό) an instance of manhood (animalhood, two-footedness).<sup>29</sup> In *Met. Z* 4 Aristotle had already argued (1029b1-3; b13-16) that in the search for an object's true οὐσία it should be brought up by using its καθ' αὐτό appellation, because this is the kind of appellation that expresses its 'what-it-is-to-be' (τὸ τί ἐστίν, τὸ τί ἦν εἶναι).

But if objects are called up after one of their coincidental modes of being, e.g. when you call Socrates 'pale man' or 'musician', problems will arise (my section 9.32). Such cases involve compounds (σύνθετα) in which the coincidental name, while it connotes the object's coincidental form, refers to the object itself. Thus expressions like 'pale man' (λευκὸς ἄνθρωπος) or \*'the pale' (τὸ λευκόν) refer to a subsistent, self-contained thing, but the focus on coincidental forms and the choices of corresponding designations are not at random: there is a formal difference between 'pale man' and 'educated man', despite the fact that they are both used to stand for one and the same individual, Socrates.

This leads Aristotle to the question what precisely is the quiddity of 'pale man', supposing you are looking for the true ousia of Socrates when he is brought up as 'this pale man'. As we saw before (my section 9.32), he proposes to use a semantic device, by indicating this compound by a single name, say, 'cloak' (ἱμάτιον). In such cases the single name is meant to prevent us, when we are looking for the quiddity of 'pale man', from erroneously focussing on either manhood or paleness, and thus formally identifying either paleness with manhood, or the hypokeimenon of the paleness with just 'thing' instead of 'man'. Aristotle then formulates the semantic requirement that an appellation that is meant as quidditative should never exceed categorical demarcations (my section 9.32).

The transgression from one category to another is called κατ' ἄλλο λέγεσθαι, and is a kind of κατὰ συμβεβηκὸς λέγεσθαι (*Met. Z* 6, 1031b13-14). The corresponding error consists in thinking that when a subsistent thing, say Callias, is brought up under a coincidental name (\*'this pale'), it is so named qua subsistent; similarly when you

<sup>29</sup> The essential coincidence of 'man' and 'manhood' is, I think, also the reason why Aristotle does not use substantives such as ἀνθρωπότης, and the like, by analogy with λευκότης, καμπυλότης etc.

identify 'pale man' with 'paleness'. Instead, in order to gain genuine knowledge of a compound object as it stands, you have to identify it as a subsistent entity which qua hypokeimenon satisfies the coincidental quiddity (*Met. Z* 6, 1031b18-28). To Aristotle indeed, *this* particular paleness exists nowhere else but in this particular instance, and this justifies the referential coincidence (my sections 9.44-9.46). Along the same line of thought, Aristotle's favourite designation τὸδε τι, "elsewhere jealously reserved for the concrete object", can on occasion stand for a particular specific form.

Plainly, it is Aristotle's trust in the validity of the semantic Main Rules, particularly RSC (my sections 1.71-1.73) which enables him to take advantage of the ambivalence of key terms in order to express his philosophic intentions: terms may have different shades of meaning *simultaneously*, and thus refer to two (or more) ontic aspects of things at the same time and even indiscriminately. By employing these devices Aristotle manages to maintain formal differences between an object's several modes of being without having to treat them as separately existing or as not representative of an object's particularness and thisness.<sup>30</sup> On the other hand, for the sake of genuine knowledge any particular form can be taken by itself, in its logical capacity of universally applying to other objects of the same kind. In a similar vein, objects can be brought up, qualified according to one of its modes of being, without threatening their ontic unity. This holds for objects (including compounds), no matter whether they are called up under a substantial or a coincidental designation, like when we say, for instance, 'The man is qua animal endowed with sensation'; 'The pale man is qua animal endowed with sensation'; \*'The pale is qua pale coloured'; 'The pale man is qua man rational'; 'The educated man is qua animal endowed with sensation'; 'The educated man is qua educated a good adviser'. Throughout his works the vital importance of the *qua*-procedure in Aristotle's strategy of argument is unmistakable (my sections 2.73-2.76).

Is Aristotle an 'astonishing man'? Your answer is all a matter of appreciation. On my perception, just as poets use the flexibility of language to couch their intentions as best as they can, Aristotle does his utmost to avail himself of the elasticity of linguistic expressions to voice his philosophical insights, particularly when it is the closely

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<sup>30</sup> A similar semantic procedure of 'scope distinction' is found in Proclus dealing with the problem area of 'causation vs. participation'; De Rijk (1992), *passim*.

related tenets of Platonism he is up against.<sup>31</sup> This enables Aristotle to show that even in epistemonical proof, however indispensably it depends on the universal applicability of common terms, it is in the final analysis the particulars that are the ultimate objects of proof.<sup>32</sup>

Aristotle has an astonishing flair for suggestively making use of the flexibility of language and speech. Unlike the poet, who feels no need for justification, Aristotle the philosopher makes every effort to underscore his moves by systematizing speech, reducing it, if necessary, to *his* protocol language and modelling it after *his* semantic views.

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<sup>31</sup> On account of the use of metaphor and metonymy, and “the more poetic use of language” Lyons remarks (II, 548f.): “What is theoretically interesting about metaphor is that, although it cannot be brought within the scope of a deterministic system of generative rules and is normally discussed under the rubric of stylistics, rather than semantics, it is by no means restricted to what is often thought of as the mere poetic use of language. If a distinction is drawn between productivity (a design-feature of the language-system) and creativity (the language-user’s ability to extend the system by means of motivated, but unpredictable, principles of abstraction and comparison), we can draw a corresponding distinction, with respect to both the production and the interpretation of language-utterances, between rules and strategies”. Similar attempts to avail himself of the flexibility of philosophic key terms are found in the subtle discussions by the 12th.-century philosopher-theologian Gilbert of Poitiers about our speaking concerning divinity; see Spruyt (2000a), *passim*. Quite a lot of putative inconsistencies in Proclus’s doctrine and arguments about causation and participation will disappear, once you recognize the pivotal role of scope distinction in his metaphysics; De Rijk (1992), 9ff.; 29-34.

<sup>32</sup> My section 2.71. On account of true οὐσία, my sections 1.72; 9.3-9.7; 10.4-10.7. See also the semantic subtleties in Aristotle’s discussion of Time; my sections 12.31-12.36. Bäck (2000, 157) rightly notes that Aristotle often appears to be aware of the limitations of the Greek language, and is well inclined to modify or rearrange the language to suit his philosophical insights. So we should not conclude too hastily that Aristotle is a victim of grammatical illusion, *pace* interpreters like Ross (1949, 577; see above, p. 411, n. 23) and Kahn (1973, 461f.).

## BIBLIOGRAPHY

### *Primary Sources\**

- ARISTOTELES graece ex recensione I. Bekkeri. Edidit Academia Regia Borussica. *Aristotelis Opera*, vol. I-II (Berlin 1831; reprint Darmstadt 1960)
- ARISTOTELIS *Categoriae* et *Liber de interpretatione*. Recognovit brevique adnotatione critica instruxit L. Minio Paluello. Oxford 1949; <sup>2</sup>1956
- Aristotelis *Topica et Sophistici Elenchi*. Recensuit adnotatione critica instruxit W.D. Ross. Oxford 1958
- Scholia in Aristotelem* collegit Ch. A. Brandis, edidit Academia Regia Borussica. *Aristotelis Opera* IV. Berlin 1836
- Ross, W.D. (ed.), *The Works of Aristotle translated into English*. Oxford University Press 1928ff. (The Revised Oxford Translation edited by Jonathan Barnes. Princeton 1984)

\* Text editions with translations and/or commentaries are found under the name of their editor

### *Commentaria in Aristotelem graeca edita consilio et auctoritate Academiae Litterarum Regiae Borussicae (CAG)*

- CAG I: ALEXANDRI APHRODISIENSIS *In Aristotelis Metaphysica Commentaria* [Books A-Δ]; ps.-ALEXANDRI *In Aristotelis Metaphysica Commentaria*, [[Books E-N]] ed. M. Hayduck. Berlin 1891
- CAG II-1: ALEXANDRI APHRODISIENSIS *In Aristotelis Analyticorum Priorum librum I Commentarium* ed. M. Wallies (Berlin 1883)
- CAG II-2: ALEXANDRI APHRODISIENSIS *In Aristotelis Topicorum libros octo Commentaria* ed. M. Wallies (Berlin 1891)
- CAG IV-1: PORPHYRII *Isagoge et In Aristotelis Categorias Commentarium* ed. A. Busse (Berlin 1887)
- CAG IV-3: AMMONII *In Porphyrii Isagogen sive V Voces* ed. A. Busse (Berlin 1891)
- CAG IV-4: AMMONII *In Aristotelis Analyticorum Priorum librum I Commentarium* ed. M. Wallies (Berlin 1899)
- CAG IV-5: AMMONII *In Aristotelis De interpretatione commentarius* ed. A. Busse (Berlin 1897)
- CAG IV-6: AMMONII *In Aristotelis Categorias commentarius* ed. A. Busse (Berlin 1895)
- CAG VI-1: SYRIANI *In Aristotelis Metaphysica Commentaria* ed. W. Kroll (Berlin 1902)
- CAG VI-2: ASCLEPII *In Aristotelis Metaphysicorum libros A-Z Commentaria*, ed. M. Hayduck (Berlin 1888)
- CAG VIII: SIMPLICII *In Aristotelis Categorias commentarium* ed. C. Kalbfleisch (Berlin 1907)
- CAG IX: SIMPLICII *In Aristotelis Physicorum libros quattuor priores Commentaria* ed. H. Diels (Berlin 1882)
- CAG XII-1: OLYMPIODORI *Prolegomena et in Categorias Commentarium* ed. A. Busse (Berlin 1892)
- CAG XIII-1: IOHANNIS PHILOPONI (olim AMMONII) *In Aristotelis Categorias*

- Commentarium* ed. A. Busse (Berlin 1898)
- CAG XIII-2: IOANNIS PHILOPONI *In Aristotelis Analytica Priora Commentaria* ed. M. Wallies (Berlin 1905)
- CAG XIII-3: IOANNIS PHILOPONI *In Aristotelis Analytica Posteriora Commentaria cum anonymo in librum II* ed. M. Wallies (Berlin 1909)
- CAG XVIII-1: ELIAE *In Porphyrii Isagogen et Aristotelis Categorias Commentaria* ed. A. Busse (Berlin 1900)
- CAG XVIII-2: DAVIDIS *Prolegomena et in Porphyrii Isagogen Commentarium* ed. A. Busse (Berlin 1904)
- CAG XVIII-3: STEPHANI *In librum Aristotelis De interpretatione Commentarium* ed. M. Hayduck (Berlin 1885)

### *Before 1600*

- AVERROES, *In Aristotelis De anima commentarius* in: *Aristotelis opera omnia cum Averrois commentariis*. Venetiis apud Iunctas 1562-1574 (reprint Minerva, Frankfurt am Main 1962)
- *In Aristotelis Metaphysicam commentarius*. Venetiis apud Iunctas 1560 (reprint Minerva, Frankfurt am Main 1962)
- A.M.S. BOETHII *Commentarii in librum Aristotelis Περὶ ἑρμηνείας* Recensuit CAROLUS MEISER. Pars prior versionem continuam et primam editionem continens (Leipzig 1877). Pars posterior secundam editionem et indices continens (Leipzig 1880)
- BURIDANUS, IOHANNES, *In Aristotelis Metaphysicam Expositiones* (unedited)
- *Tractatus de differentia universalis ad individuum II* ed. SLAWOMIR SZYLLER in *Przegląd Tomistyczny*. Rosznik Poswiecony historii teologii, tom. III. (Warsaw 1987), 135-78
- *Summulae VIII, De demonstrationibus* ed. L.M. de Rijk. Nijmegen 2001
- PACIUS, J., *Julii Pacii a Beriga in Porphyrii Isagogen et Aristotelis Organum Commentarius Analyticus*. Frankfurt am Main 1597 (reprint Hildesheim 1966)
- SOTO, DOMINGO DE, *In Porphyrii Isagogen, Aristotelis Categorias librosque de demonstratione commentaria*. Venetiis 1587 (reprint Minerva, Frankfurt am Main 1967)
- THOMAS AQUINAS, *In duodecim libros Metaphysicorum Aristotelis Expositio* ed. Spiazza. Marietti. Turin/ Rome 1964
- *Summa theologiae cum textu ex recensione leonina*. Pars prima et prima secundae. Marietti. Turin/ Rome 1952
- WILLIAM OF MOERBEKE, *Commentaire sur le Peri Hermeneias d'Aristote. Traduction de Guillaume de Moerbeke. Edition critique et étude sur l'utilisation du Commentaire dans l'oeuvre de saint Thomas d'Aquin* par G. Verbeke). *Corpus latinum commentariorum in Aristotelem graecorum II*. Louvain/Paris 1961
- ZABARELLA, I., *In duos Aristotelis libros Posteriorum Analyticorum commentaria*. Venetiis 1582

### *After 1600*

- ACKRILL, J.L. (1963), *Aristotle's Categories and De Interpretatione*. Translated with Notes. Oxford
- (1981), *Aristotle the Philosopher*. Oxford/New York
- (1981a), "Aristotle's Theory of Definition: Some Questions on *Posterior Analytics* II 8-10": in Berti (ed.), 359-84; reprint in Ackrill (1997), 110-30
- (1997), *Essays on Plato and Aristotle*. Oxford

- AERTS, W.J. (1965), *Periphrastira. An investigation into the use of εἶναι and ἔχειν as auxiliaries or pseudo-auxiliaries in Greek from Homer up to the present day* (diss.). Amsterdam
- ALGRA, K.A. (1995), *Concepts of Space in Greek Thought*. Philosophia Antiqua. A Series of Studies on Ancient Philosophy vol. LXV. Leiden
- (2003), "Aristotle, GCI 3: Substantial Change and the Problem of Not-Being in F.A.J. de Haas & J. Mansfeld, *Aristotle on Coming-to-Be and Passing-Away*. Acts of the 15th Symposium Aristotelicum. Oxford University Press.
- ANNAS, J. (1974), "Individuals in Aristotle's *Categories*" in *Phronesis* 19, 146-52
- (1976), *Aristotle's Metaphysics Books M and N*, translated with introduction and notes. Oxford
- (1987), "Die Gegenstände der Mathematik bei Aristoteles" in Graeser (ed.), 131-47
- ARENS, H. (1984), *Aristotle's Theory of Language and its Tradition*. Texts from 500 to 1750. Selection, translation and commentary. Studies in the History of Linguistics, 29. Amsterdam/Philadelphia
- ARPE, C. (1938), *Das τί ἦν εἶναι bei Aristoteles*. Hamburg (repr. New York 1976)
- AUBENQUE, P. (ed.) (1979), *Etudes sur la Métaphysique d'Aristote*. Actes du VIe Symposium Aristotelicum. Paris
- (ed.) (1980), *Concepts et catégories dans la pensée antique*. Paris
- AX, W. (1979), "Zum isolierten πῆμα in Aristoteles' *De interpretatione* 16b19-25" in *Archiv für Geschichte der Philosophie* 61, 271-9
- BÄCK, A. (1996), *On Reduplication. Logical Theories of Qualification*. Studien und Texte zur Geistesgeschichte des Mittelalters. Bnd 49. Leiden
- (2000), *Aristotle's Theory of Predication*. Philosophia Antiqua. A Series of Studies on Ancient Philosophy, vol. LXXXIV Leiden
- BALME, D.M. (1987a), "The Place of Biology in Aristotle's Philosophy" in Gotthelf & Lennox (eds.), 9-20
- (1987b), "Aristotle's Use of Division and Differentiae" in Gotthelf & Lennox (eds.), 69-89
- (1987c), "Aristotle's Biology Was Not Essentialist" in Gotthelf & Lennox (eds.), 291-312
- (1990), "Matter in the Definition: A Reply to G.E.R. Lloyd" in Devereux & Pellegrin (1990), 49-54
- BARNES, J. (1975; <sup>2</sup>1994), *Aristotle's Posterior Analytics*, Translated with Notes. Clarendon Press Oxford.
- (1979), BARNES, J., SCHOFIELD, M., SORABJI, R. (eds.) *Articles on Aristotle*. Vol. III: *Metaphysics*. London
- (1981), "Proof and the Syllogism" in Berti (ed.), 17-59
- (1997; <sup>2</sup>1999), "Roman Aristotle" in J. Barnes & M. Griffin (eds.), *Philosophia togata* II. Clarendon Press Oxford, 1-69
- BASSENGE, F. (1960), "Das τὸ ἐν εἶναι, τὸ ἀγαθὸν εἶναι etc. etc. und das τὸ τί ἦν εἶναι bei Aristoteles" in *Philologus* 104, 14-47; 201-22
- BENVENISTE, E. (1966), *Problèmes de linguistique générale*. Gallimard Paris
- BERTI, E. (1962), *La filosofia del primo Aristotele*. Padua
- (1979), "Le problème de la substantialité de l'Etre et le l'Un dans la *Métaphysique*" in Aubenque (ed.), 89-129
- (ed.) (1981), *Aristotle on Science. The Posterior Analytics*. Proceedings of the Eighth Symposium Aristotelicum held in Padua from September 7 to 15, 1978. *Studia Aristotelica* 9. Padua
- (1983), "Quelques remarques sur la conception aristotélicienne du non-être" in *Revue de philosophie ancienne* 1, 115-42
- BLOND, J.M. LE (1939), *Logique et méthode chez Aristote*. Paris
- (1939a), "La définition chez Aristote: *Gregorianum* 20, 351-80 (= "Aristotle on Definition" in Barnes et al. (eds.), *Articles on Aristotle* I, 63-79)



- BOLTON, R. (1976), "Essentialism and Semantic Theory in Aristotle: *Posterior Analytics* II 7-10" in *Philosophical Review* (85), 514-44
- (1987), "Definition and Scientific Method in Aristotle's *Posterior Analytics* and *Generation of Animals*" in Gotthelf & Lennox (eds.), 120-66
- (1990), "The Epistemological Basis of Aristotelian Dialectic" in Devereux & Pellegrin (eds.), 185-236
- BONITZ, H., (1848-49), *Aristotelis Metaphysica*, 2 vols Bonn.
- (1870), *Index aristotelicus* (Berlin; reprint Graz 1955)
- BOS, A.P. (2001), "Aristotle's *De Anima* II.1: The Traditional Interpretation Rejected" in D. Sfendoni-Mentzou, J. Hattiangadi & D.M. Johnson (eds.), *Aristotle and Contemporary Science*. Vol. II, 187-201
- BOSTOCK, D. (1994), *Aristotle, Metaphysics Books Z and H*, Translated with a Commentary. Clarendon Press Oxford
- BOYLAN, M. (1983), *Method and Practice in Aristotle's Biology*. University Press of America. Washington
- BRAGUES, R. (1980), "De la disposition. A propos de DIATHESIS chez Aristote" in Aubenque (ed.), 285-307
- (1982), *Du temps chez Platon et Aristote*. Paris
- BRAKAS, G. (1988), *Aristotle's Concept of the Universal*. Hildesheim
- BRENTANO, F. (1862), *Von der mannigfachen Bedeutungen des Seienden nach Aristoteles* [edited and translated by R. George: *On the Several Senses of Being in Aristotle*. Berkeley, 1975]
- BRINKMANN, K. (1996), "The Consistency of Aristotle's Thought on Substance" in Wians (ed.), 289-302
- BROWN, L. (1994), "The Verb 'to Be' in Greek Philosophy: Some Remarks" in Everson (ed.), 212-36
- BRUNSCHWIG, J. (1981), "L'objet et la structure des *Seconds Analytiques* d'après Aristote" in Berti (ed.), 61-96
- (1990), "Remarques sur la communication de Robert Bolton" [Bolton 1990] in Devereux & Pellegrin (eds.), 237-62
- BURGER, R. (1987), "Is Each Thing the Same as its Essence?": On *Metaphysics Z*. 6-11" in *Review of Metaphysics* 41, 53-76
- BURNEYAT, M. and others (1979), *Notes on Book Zeta of Aristotle's Metaphysics*. Record of a Seminar held in London. Oxford (Sub-Faculty of Philosophy)
- (1981) "Aristotle on Understanding Knowledge" in Berti, 97-139
- (1984), *Notes on Eta and Theta of Aristotle's Metaphysics*. Oxford (Sub-Faculty of Philosophy)
- BÜTTGEN, PH., Stéphanie Diebler et Marwan Rashed (eds.) (1999), *Théories de la phrase et de la proposition de Platon à Averroès*. Collection Études de littérature ancienne 10. Paris
- CAUJOLLE-ZASLAWSKY, F. (1980), "Les relatifs dans les *Catégories*" in Aubenque (ed.), 157-95
- (1990), "Etude préparatoire à une interprétation du sens aristotélicien d'ἐπαγωγή" in Devereux & Pellegrin (eds.), 365-87
- CAVAGNARO-STUIJT, E. (1995), *Aristotele e il tempo. Analisi di Physica IV, 10-14* [with summary in English, 315-25]. Leeuwarden
- CAVINI, W. (1985), "La negazione di frase nella logica greca" in W. Cavini *et al* (eds.), *Studi su papiri greci di logica e medicina*. Accademia Toscana di Scienze e Lettere "La Colombaria", *Studi*, vol. LXXIV. Firenze, 7-126
- CELLUPRICA, V. (1987), "Logica e semantica nella teoria aristotelica della predicazione" in *Phronesis* 32, 166-87
- CHANTRAINE, P. (1968-1980), *Dictionnaire étymologique de la langue grecque. Histoire des mots*. Paris
- CHARLES, D. (1990), "Aristotle on Meaning, Natural Kinds and Natural History" in Devereux & Pellegrin (eds.), 145-67

- (1994), "Aristotle on Names and their Signification" in S. Everson (ed.), 37-73
- CHARLTON, W. (1970), *Aristotle's Physics, Books I and II*. Translation and Commentary. Oxford
- (1972), "Aristotle and the Principle of Individuation" in *Phronesis* 17, 239-49
- (1983), "Prime Matter: A Rejoinder" in *Phronesis* 28, 197-211
- CHIARADONNA, R. (1998), "Essence et prédication chez Porphyre et Plotin" in *Revue des sciences philosophiques et théologiques* (82), 577-606
- CLEARY, J.J. (1987) "Science, Universals and Reality" in *Ancient Philosophy* 7, 95-130
- (1995), *Aristotle and Mathematics. Aporetic Method in Cosmology and Metaphysics*. Philosophia Antiqua. A Series of Studies on Ancient Philosophy vol. LXVII. Leiden
- CODE, A. D. (1988), "Metaphysics and Logic" in Matthen (ed.), 127-49 [reprint in Gerson (ed.), 167-85]
- (1996), "Owen on the Development of Aristotle's *Metaphysics*" in Wians (ed.), 303-25
- COHEN, S.M. & MATTHEWS, G.B. (1991), *Ammonius. On Aristotle's Categories, translated*. Duckworth London
- COOPER, J.M. (1990), "Metaphysics in Aristotle's Embryology" in Devereux & Pellegrin (eds.), 55-84
- DANCY, R.M. (1975), *Sense and Contradiction: A Study in Aristotle*. *Synthese Historical Library*. Texts and Studies in the History of Logic and Philosophy, vol. 14. Dordrecht
- (1986), "Aristotle and Existence", reprint (of 1983) in Knuuttila and Hintikka (eds.), *The Logic of Being*. Historical Studies. Dordrecht
- (1996), "Keeping Body and Soul Together: On Aristotle's Theory of Forms" in Wians (ed.), 249-87
- DENNISTON, J.D. (1934), *The Greek Particles*. Oxford (<sup>2</sup>1966, with corrections)
- DENYER, N. (1991), *Language, Thought and Falsehood in Ancient Greek Philosophy*. Issues in Ancient Philosophy (General editor M. Schofield). London/New York
- DESLAURIERS, M. (1990), "Aristotle's Four Types of Definition" in *Apeiron* 23, 1-26
- DETEL, W. (1998), *Aristoteles, Analytica Posteriora*. Übersetzt und erläutert von Wolfgang Detel. I Einleitung. II Anmerkungen. Berlin
- DEVEREUX, D. T. & PELLEGRIN, P. (eds.) (1990), *Biologie, logique et métaphysique chez Aristote*. Paris
- DEVEREUX, D. T. (1990), "Comments on Robert Bolton's 'The Epistemological Basis of Aristotelian Dialectic'" in Devereux & Pellegrin (eds.), 263-86
- (1992), "Inherence and Primary Substance in Aristotle's *Categories*" in *Ancient Philosophy* 12, 113-31 (reprint in L.P. Gerson (ed.) I, 52-72)
- DONNELLAN, K. S. (1977), "Reference and Definite Descriptions" in Stephen P. Schwartz (ed.), *Naming, Necessity, and Natural Kinds*, 42-56. Cornell University Press. Ithaca N.Y.
- DÜRING, I (1966), *Aristoteles. Darstellung und Interpretationen seines Denkens*. Heidelberg
- EBBESSEN, S. (1986), "The Chimaera's Diary" in: S. Knuuttila & J. Hintikka (eds.), *The Logic of Being*. Historical Studies. Dordrecht, 115-43
- (1987), "Boethius as an Aristotelian Scholar" in Wiesner (ed.) II, 286-311
- (1990), "Boethius as an Aristotelian Commentator" in Sorabji (ed.), 373-91
- EBERT, T.H. (1977), "Zur Formulierung prädikativer Aussagen in den logischen Schriften des Aristoteles" in *Phronesis* 22, 123-45
- (1985), "Gattungen der Prädikate und Gattungen des Seienden bei Aristoteles. Zum Verhältnis von *Kat.* 4 und *Top.* I 9" in *Archiv für Geschichte der Philosophie* 67, 113-38
- EINARSON, B. (1936), "On Certain Mathematical Terms in Aristotle's Logic" in *American Journal of Philology* 57, 33-54 and 151-72

- ENGBERG-PEDERSEN, T. (1979), "More on Aristotelian Epagoge" in *Phronesis* 24, 301-19
- EVERSON, S. (ed.) (1994), *Language. Companions to Ancient Thought* 3. Cambridge
- (1999), *Aristotle on Perception*. Oxford University Press
- FEREJOHN, M. (1980), "Aristotle on Focal Meaning and the Unity of Science" in *Phronesis* 25, 117-28
- FINE, G. (1982), "Aristotle and the More Accurate Arguments" in Schofield & Nussbaum (eds.), 155-77
- FREDE, D. (1970), *Aristoteles und die 'Seeschlacht'. Das Problem der Contingentia Futura in De interpretatione* 9. Göttingen
- (1985), "Aristotle on the Limits of Determinism: Accidental Causes in *Metaphysics* E 3" in Gotthelf (ed.), 207-25
- (1985a), "The Sea-Battle Reconsidered. A Defence of the Traditional Interpretation" in: ANNAS J., *Oxford Studies in Ancient Philosophy*, vol. 3, 31-87
- FREDE, M. (1985), "Substance in Aristotle's *Metaphysics*" in Gotthelf (ed.), 17-26
- & Patzig, G. (1988), *Aristoteles, Metaphysik Z*. Text, Übersetzung und Kommentar. 2 Bände. Munich
- (1990), "The Definition of Sensible Substances in *Metaphysics* Z" in Devereux & Pellegrin (eds.), 113-29
- FREELAND, C. (1990), "Scientific Explanation and Empirical Data in Aristotle's *Meteorology*" in Devereux & Pellegrin (eds.), 287-320 [reprint from *Oxford Studies in Ancient Philosophy* 8 (1990), 67-102]
- FURTH, M. (1987), "Aristotle's Biological Universe. An Overview" in Gotthelf & Lennox (eds.), 21-52
- GASKIN, R. (1996), "Sea Battles, Worn-out Cloaks, and Other Matters of Interpretation: Weidemann on Aristotle's *Peri Hermeneias*" in *Archiv für die Geschichte der Philosophie* 78, 48-59
- GEACH, P.T. (1962; <sup>3</sup>1980), *Reference and Generality*. Cornell University Press. Ithaca N.Y.
- GERSON, L.P. (ed.) (1999), *Aristotle. Critical Assessments*. Vol. I: *Logic and Metaphysics*. Vol. II: *Physics, Cosmology and Biology*. Routledge. London/New York
- GILL, M.L. (1989), *Aristotle on Substance: The Paradox of Unity*. Princeton University Press
- GILLESPIE, C.M. (1925), "The Aristotelian Categories" in *Classical Quarterly* 19, 75-84 (reprint in Barnes, Schofield, Sorabji (eds.), vol. III, 1-12)
- GOLDIN, O. (1996), *Explaining an Eclipse*. Aristotle's *Posterior Analytics* 2, 1-10. Ann Arbor
- GÓMEZ-LOBO, A. (1966), *ΣΥΜΒΕΒΗΚΟΣ in der Metaphysik des Aristoteles*. Eine Untersuchung zu Voraussetzungen und Grenzen des aristotelischen Denkens. (diss.) Munich
- (1980), "The So-Called Question of Existence in Aristotle, *An. Post.* 2, 1-2" in *Review of Metaphysics* 34, 71-90
- GOTTHELF, A. (ed. 1985), *Aristotle on Nature and Living Things*. Philosophical and Historical Studies presented to David M. Balme on his Seventieth Birthday. Pittsburgh/Bristol
- (1985a), "Notes towards a Study of Substance and Essence in Aristotle's *Parts of Animals* II-IV" in Gotthelf (ed.), 27-54
- (1987a), "First Principles in Aristotle's *Parts of Animals*" in Gotthelf & Lennox (eds.), 167-98
- (1987b), "Aristotle's Conception of Final Causality" in Gotthelf & Lennox (eds.), 204-42
- GOTTHELF, A. & LENNOX J.G. (eds.) (1987), *Philosophical Issues in Aristotle's Biology*. Cambridge University Press

- GRAESER, A. (1977), "On Language, Thought, and Reality in Ancient Greek Philosophy" in *Dialectica*, 31, 359-88
- (ed.) (1987), *Mathematics and Metaphysics in Aristotle (Mathematik und Metaphysik bei Aristoteles)*. Akten des X Symposium Aristotelicum Sigriswil 6-12 Sept. 1984. *Berner Reihe Philosophischer Studien*, Bnd 6. Bern
- GRAHAM, D.W. (1989), "Two Systems in Aristotle" in *Oxford Studies in Ancient Philosophy* 7, 215-31
- (1996), "The Metaphysics of Motion: Natural Motion in *Physics* II and *Physics* VIII" in Wians (ed.), 171-92
- GRANGER, H. (1995), "Aristotle on the Subjecthood of Form" in *Oxford Studies in Ancient Philosophy* 12, 135-59 (reprint in L.P. Gerson (ed.), 203-23)
- (1995a), "The Subjecthood of Form: A Reply to Shield's" in *Oxford Studies in Ancient Philosophy* 13, 177-85 (reprint in L.P. Gerson (ed.), 237-44)
- GREDT, J., O.S.B. (<sup>7</sup>1937), *Elementa philosophiae aristotelico-thomisticae*. I *Logica / Philosophia naturalis*. II *Metaphysica / Ethica*. Freiburg im Breisgau
- GUTHRIE, W.K.C. *A History of Greek Philosophy*. Vol. IV (1975), *Plato. The Man and His Dialogues: Earlier Period*; Vol. V (1978), *The Later Plato and The Academy*; Vol. VI (1981), *Aristotle. An Encounter*. Cambridge University Press
- HAAS, F.A.J. DE (1997), *John Philoponus' New Definition of Prime Matter. Aspects of its Background in Neoplatonism and the Ancient Commentary Tradition*. Philosophia Antiqua. A Series of Studies on Ancient Philosophy vol. LXIX. Leiden
- (1997a), "Aristotle's Fourteenth Aporia and the Three Dimensions in Later Neoplatonism" in J.J. Cleary, *The Perennial Tradition of Neoplatonism*. [De Wulf-Mansion Centre. Ancient and Medieval Philosophy, Series 1, 24. Louvain], 347-68
- (2000), "Recollection and Potentiality in Philoponus" in M. Kardaun & Spruyt (eds.), 165-84
- (forthcoming a), "The Matter-like Being of Mathematical Objects in Aristotle"
- (forthcoming b), "Survival of the Fittest? Mutations of Aristotle's Method of Inquiry in Late Antiquity"
- HADOT, P. (1980), "Sur les divers sens du mot  $\pi\rho\acute{\alpha}\gamma\mu\alpha$  dans la tradition philosophique grecque" in P. Aubenque (ed.), *Concepts et catégories dans la pensée antique*. Paris, 309-19
- HAGER, F.-P. (ed.) (1972), *Logik und Erkenntnislehre des Aristoteles*. Darmstadt
- HALPER, E. (1985), "Aristotle on the Convertibility of One and Being" in *The New Scholasticism* 59, 213-27
- (1989), *One and Many in Aristotle's Metaphysics*. Columbus
- HAPP, H. (1971), *Hyle. Studien zum aristotelischen Materie-Begriff*. Berlin/New York
- HARLFINGER, D. (1979), "Zur Überlieferungsgeschichte der *Metaphysik*" in Aubenque (ed.), 7-33
- HEATH, TH. L. (1949), *Mathematics in Aristotle*. Oxford
- HEINAMAN, R. (1979), "Aristotle's Tenth Aporia" in *Archiv für Geschichte der Philosophie* 61, 248-70
- (1980), "An Argument in *Metaphysics* Z 13" in *Classical Quarterly* 30, 72-85
- (1981), "Non-Substantial Individuals in the *Categories*" in *Phronesis. A Journal for Ancient Philosophy* 26, 295-307
- HINTIKKA, J. (1973), *Time and Necessity*. Studies in Aristotle's Theory of Modality. Oxford
- HUGHES, G.J. (1979), "Universals as Potential Substances: The Interpretation of *Metaphysics* Z 13" in Burnyeat et. al. (1979), 107-26
- HUSSEY, E. (1983), *Aristotle's Physics. Books III and IV*. Translated with Notes. Clarendon Press Oxford
- IRWIN, T.H. (1982), "Aristotle's Concept of Signification", in M. Schofield & M.C. Nussbaum, 241-66

- JACOBS, W. (1980), "The Existential Presuppositions of Aristotle's Logic" in *Philosophical Studies* 37, 419-28
- JAEGER, W. (1923), *Aristoteles. Grundlegung einer Geschichte seiner Entwicklung*. Berlin (transl. R. Robinson, *Aristotle. Fundamentals of the History of his Development*. Oxford 1934)
- KAHN, C.H. (1973), *The Verb 'Be' in Ancient Greek*. Dordrecht
- (1981), "The Role of Nous in the Cognition of First Principles in *Posterior Analytics*" in Berti (ed.), 385-414
- (1982), "Why Existence Does not Emerge as a Distinct Concept in Greek Philosophy?" in Parviz Morewedge (ed.), *Philosophies of Existence. Ancient and Medieval*. New York, 7-17
- (1985), "On the Intended Interpretation of Aristotle's *Metaphysics*" in Wiesner (ed.) I, 311-38
- KAPP, E. (1942), *Greek Foundations of Traditional Logic*.
- KARDAUN, M. S. (1993), *Der Mimesisbegriff in der griechischen Antike*. Neubetrachtung eines umstrittenen Begriffes als Ansatz zu einer neuen Interpretation der platonischen Kunstauffassung. Koninklijke Nederlandse Akademie van Wetenschappen. *Verhandelingen Afdeling Letterkunde*, Nieuwe Reeks, deel 153 (Amsterdam/Oxford/New York)
- (2000), Maria Kardaun & Joke Spruyt (eds.), *The Winged Chariot*. Collected Essays on Plato and Platonism in Honour of L.M. de Rijk (*Brill's Studies in Intellectual History* vol. 100). Leiden
- (2000a), "Platonic Art Theory: A Reconsideration" in M. Kardaun & J. Spruyt (eds.), 135-64
- KERFERD, G.B. (1976), Review of Ch. H. Kahn (1973) in *Archiv für Geschichte der Philosophie* 58, 60-4
- KIRWAN, C.A. (1971), *Aristotle's Metaphysics, Books Γ, Δ, and E*. Translated with Notes. Clarendon Press Oxford
- KLOWSKI, J. (1975), Review of Ch. H. Kahn (1973) in *Gnomon* 47, 737-4
- KNEALE, W. & M. (1962), *The Development of Logic*. Clarendon Press Oxford
- KNEEPKENS, C.H. (2000), "Grammar and Semantics in the Twelfth Century: Petrus Helias and Gilbert de la Porrée on the Substantive Verb" in M. Kardaun & J. Spruyt (eds.), 237-75
- KOSMAN, L.A. (1984), "Substance, Being and Energeia" in *Oxford Studies in Ancient Philosophy* 2, 121-49
- KRAUS, M. (1987), *Name und Sache. Ein Problem im frühgriechischen Denken* in *Studien zur antiken Philosophie* Bnd 14. Amsterdam
- KRETZMANN, N. (1987), "Boethius and the Truth about Tomorrow's Seabattle" in L.M. de Rijk & H.A.G. Braakhuis (eds.), *Logos and Pragma*. Essays on the Philosophy of Language in Honour of Professor Gabriel Nuchelmans. Nijmegen, 63-97
- KUEHNER, R. & GERTH, B. (I,<sup>3</sup>1898; II,<sup>3</sup>1904), *Ausführliche Grammatik der griechischen Sprache*. Zweiter Teil: *Satzlehre*. 2 Bde (Hannover/Leipzig; reprint Hannover 1983)
- KULLMANN, W. (1981), "Die Funktion der mathematischen Beispiele in Aristoteles' *Analytica Posteriora*" in Berti (ed.), 245-70
- KUNG, J. (1978), "Can Substance be Predicated of Matter?" in *Archiv für Geschichte der Philosophie* 60, 140-59
- (1986), "Aristotle on 'Being is Said in Many Ways' " in *History of Philosophy Quarterly* 3, 3-18 (reprint in L.P. Gerson (ed.), 186-202
- LEAR, J. (1980), *Aristotle and Logical Theory*. Cambridge
- LENNOX, J.G. (1987), "Divide and Explain. The *Posterior Analytics* in Practice": in Gotthelf & Lennox (eds.), 90-119
- (1987a), "Kinds, Forms of Kinds, and the More and the Less in Aristotle's Biology" in Gotthelf & Lennox (eds.), 339-59

- (1990), "Notes on David Charles on *H.A.*" in Devereux & Pellegrin (eds.), 169-83
- (1996), "Aristotle's Biological Development: The Balme Hypothesis" in Wians (ed.), 229-48
- LESZL, W. (1975), *Aristotle's Conception of Ontology*. Padua
- LEWIS, F.A. (1991), *Substance and Predication in Aristotle*. Cambridge University Press
- LLOYD, A.C. (1969-70), "Non-discursive Thought — An Enigma of Greek Philosophy" in *Proceedings of the Aristotelian Society* (70), 261-74
- (1981), "Necessity and Essence in the *Posterior Analytics*" in Berti (ed.), 157-71
- (1990), *The Anatomy of Neoplatonism*. Oxford
- LLOYD, G.E.R. (1979), *Magic, Reason and Experience. Studies in the Origin and Development of Greek Science*. Cambridge
- (1987), "Empirical Research in Aristotle's Biology" [A Selection Excerpted from his *Magic, Reason, and Experience*. Cambridge 1979] in Gotthelf & Lennox (eds.), 53-63
- (1990). "Aristotle's Zoology and his Metaphysics: The *status quaestionis*. A critical review of some recent theories" in Devereux & Pellegrin (eds.), 7-35
- (1996), *Aristotelian Explorations*. Cambridge
- LOUX, M.J. (1991), *Primary Ousia*. Cornell University Press. Ithaca N.Y.
- LUKASIEWICZ, J. (1951), *Aristotle's Syllogistic from the Standpoint of Modern Formal Logic*. Oxford
- LYONS, J. (1977), *Semantics*. 2 vols. Cambridge University Press
- MADIGAN, A. (1999), *Aristotle. Metaphysics. Books B and K 1-2. Translation with a Commentary*. Clarendon Aristotle Series Oxford
- MAIER, H., *Die Syllogistik des Aristoteles*. Erster Teil (1896): *Die logische Theorie des Urteils bei Aristoteles*. Zweiter Teil (1900): *Die logische Theorie des Syllogismus und die Entstehung der aristotelischen Logik*. Erste Hälfte: *Formenlehre und Technik des Syllogismus*. Zweite Hälfte: *Die Entstehung der aristotelischen Logik*. Tübingen
- MALCOLM, J. (1980/1981), "On the Generation and Corruption of the Categories" in *Review of Metaphysics* 34, 662-81
- MANSFELD, J. (1990), *Studies in the Historiography of Greek Philosophy*. Assen/ Maastricht
- (1994), *Prolegomena*. Questions to be Settled Before the Study of an Author, or a Text. *Philosophia Antiqua. A Series of Studies on Ancient Philosophy* vol. LXI. Leiden
- MANSON, S. (1946; <sup>2</sup>1976), *Le jugement d'existence chez Aristote* (Publications universitaires de Louvain). Louvain
- (ed.) (1961), *Aristote et les problèmes de méthode*. Papers of the Second Symposium Aristotelicum. Louvain
- (1981), "La signification de l'universel d'après *An. Post. I 1*" in Berti (ed.), 329-42
- MATTHEN, M. (1983), "Greek Ontology and the 'Is' of Truth" in *Phronesis* 28, 113-35
- (1988), (ed.), *Aristotle Today. Essays on Aristotle's Ideal of Science*. Edmonton Alberta
- (1988a), "Individual Substances as Hylomorphic Complexes" in Matthen (ed.), 151-76
- MATTHEWS, G. B. (1982), "Accidental Unities", in Schofield & Nussbaum, 223-40
- MCKIRAHAN, R.D. (1992), *Principles and Proofs. Aristotle's Theory of Demonstrative Science*. Princeton University Press
- MIGNUCCI, M. (1965), *La teoria aristotelica della scienza*. Pubblicazioni della Facoltà di Magistero dell' Università di Padova VII. Firenze
- (1969), *Aristotele, Gli Analitici Primi*. Traduzione, introduzione e commento. Napoli
- (1986), "Aristotle's Definitions of Relatives in *Cat. 7*" in *Phronesis* 31, 101-27

- MODRAK, D.K.W. (1996), "Aristotle's Epistemology: One or Many Theories?" in Wians (ed.), 151-70
- MOJSISCH, B. (ed.) (1986), *Sprachphilosophie in Antike und Mittelalter*. Bochumer Studien zur Philosophie 3. Amsterdam
- MONTANARI, E. (1988), *La sezione linguistica del Peri hermeneias di Aristotele*. Studi e testi, 5 and 8. Vol. II: *Il commento*. Firenze
- MORAVCSIK, J.M.E. (1967), "Aristotle's Theory of Categories" in Moravcsik (ed.), *Aristotle. A Collection of Critical Essays*. New York, 125-45
- MORRISON, D. (1983), *Three Criteria of Substance in Aristotle's Metaphysics: Unity, Definability, Separation*. Princeton PH. D.
- (1990), "Some Remarks on Definition in *Metaphysics Z*" in Devereux & Pellegrin (eds.), 130-44
- NUCHELMANS, G. (1973), *Theories of the Proposition. Ancient and Medieval Conceptions of the Bearers of Truth and Falsity*. Amsterdam
- (1988), "The Distinction of actus exercitus/actus significatus in Medieval Semantics: in Norman Kretzmann (ed.), *Meaning and Inference in Medieval Philosophy*. Dordrecht (reprint in Nuchelmans 1996, ch. VI, 57-90)
- (1992), *Secundum/tertium adiacens. Vicissitudes of a logical distinction*. Koninklijke Nederlandse Akademie van Wetenschappen. Mededelingen van de Afdeling Letterkunde, Nieuwe reeks deel 55, no. 10. Amsterdam
- (1996), *Studies on the History of Logic and Semantics, 12-17th Cent.*, edited by E.P. Bos in *Variorum Collected Studies Series*. Hampshire
- NUSSBAUM, M.C. (1982), "Saving Aristotle's Appearances" in Schofield & Nussbaum, 266-93
- OEHLE, K. (1962; Hamburg <sup>2</sup>1985), *Die Lehre vom noetischen und dianoetischen Denken bei Platon und Aristoteles*. Ein Beitrag zur Erforschung der Geschichte des Bewusstseinsproblems in der Antike. Munich
- (1984, <sup>3</sup>1997), *Aristoteles, Kategorien*. Übersetzt und erläutert. *Aristoteles. Werke in deutscher Übersetzung*. Band I. Teil I. Berlin/Darmstadt
- OPHUIJSEN, J. VAN (1993), "The Semantics of a Syntactician: Things Meant by Verbs according to Apollonius Dyscolus Περὶ συντάξεως" in Wolfgang Haase (ed.), *Aufstieg und Niedergang der Römischen Welt*. Berlin/New York, 731-70
- OWEN, G.E.L. (1961), "Τὶ εἶναι τὰ φαινόμενα" in S. Mansion (ed. 1961), 83-103, reprinted in Owen (1986), 239-51
- (1965), "Aristotle on the Snares of Ontology" in J. R. Bambrough (ed.), *New Essays on Plato and Aristotle* (London), 69-75, reprinted in Owen (1986), 259-78
- (ed.) (1968), *Aristotle on Dialectic*. Oxford Clarendon Press.
- (1978-79), "Particular and General" in *Proceedings of the Aristotelian Society*, 1-21
- (1986), *Logic, Science, and Dialectic*. Collected Papers in Greek Philosophy, edited by Martha Nussbaum. Duckworth London
- OWENS, J. (1951, <sup>3</sup>1978), *The Doctrine of Being in the Aristotelian Metaphysics*. Toronto
- (1986), "Is There any Ontology in Aristotle?" in *Dialogue. Canadian Philosophical Review* 25, 697-707
- PAGE, C. (1985), "Predicating Forms of Matter in Aristotle's *Metaphysics*" in *Review of Metaphysics* 39, 57-82
- PATER, W.A. DE (1965), *Les Topiques d'Aristote et la dialectique platonicienne*. La méthodologie de la définition. *Etudes thomistiques*, vol. X. Fribourg Switzerland
- PATZIG, G. (1969), *Aristotle's Theory of the Syllogism*. A Logico-philological Study of Book A of the *Prior Analytics*, translated from the German by Jonathan Barnes. Synthese Library. Dordrecht
- (1979), "Logical Aspects of Some Arguments in Aristotle's *Metaphysics*" in Aubenque (ed.), 37-46
- (1981), "Erkenntnisgründe, Realgründe und Erklärungen (zu *Anal. Post. A 13*)" in Berti (ed.), 141-56

- PELLEGRIN, P. (1982), *Les classifications des animaux: statut de la biologie et unité de l'Aristotélisme*. Paris. (Revised edition 1986), *Aristotle's Classification of Animals* (tr. A Preus). Berkeley.
- (1985), "Aristotle: A Zoology without Species" in Gotthelf (ed.), 95-115
- (1987), "Logical Difference and Biological Difference: The Unity of Aristotle's Thought" in Gotthelf & Lennox (eds.), 313-38
- PEPIN, J. (1985), "ΣΥΜΒΟΛΑ, ΣΗΜΕΙΑ, ὈΜΟΙΩΜΑΤΑ. A propos de *De Interpretatione* I, 16a3-8 et *Politique* VIII 5, 1340a6-39" in J. Wiesner (ed.) I, 22-44
- POLIAKOFF, M.B. (1987), *Combat Sports in the Ancient World*. New Haven
- POSTE, E. (1866), *Aristotle on Fallacies or the Sophistici Elenchi*, with a translation and notes. London Reprint Ann Arbor, Michigan/London 1979
- PRAUSS, G. (1966), *Platon und der logische Eleatismus*. Berlin
- PRIOR, A.N. (1957), *Time and Modality*. Oxford
- (1967), *Past, Present, and Future*. Oxford
- RAALTE, M. VAN (1993), *Theophrastus. Metaphysics*, with an introduction, translation and commentary. Leiden
- RAPP, CH. (1991), "ESTI TRITON. Aristoteles, *De interpretatione* 10, 19b21-22" in *Archiv für Geschichte der Philosophie* 73, 125-8
- REALE, G. (1968), *Aristotele. La Metafisica*. Traduzione, introduzione e commento. vol. 1-2. Napoli
- REHN, R. (1986), "Zur Theorie des Onoma in der griechischen Philosophie" in B. Mojsisch (1986), 63-119
- (2000), *Sprache und Dialektik in der Aristotelischen Philosophie*. K. Flasch, R. Imbach, B. Mojsisch, O. Pluta (eds.), *Bochumer Studien zur Philosophie*, Bnd 31. Amsterdam/Philadelphia
- RESCHER, N. (1963), "An Interpretation of Aristotle's Doctrine of Future Contingency and Excluded Middle" in N. Rescher (ed.), *Studies in the History of Arabic Logic*, Pittsburgh, 43-54
- RIJEN, J. VAN (1989), *Aspects of Aristotle's Logic of Modalities*. Synthese Historical Library vol. 35. Dordrecht
- RIJK, L.M. DE (1950), "Some Notes on Aristotle, *Metaphysics* A 4, 985b9" in *Mnemosyne* 3, 314-8
- (1951), "The Authenticity of Aristotle's *Categories*" in *Mnemosyne* 4, 129-59
- (1952), *The Place of the Categories of Being in Aristotle's Philosophy*. Assen
- (1962), *Logica Modernorum. A Contribution to the History of Early Terminist Logic*. Vol. I: *The Twelfth Century Theories of Fallacy*. Assen
- (1964), "On the Chronology of Boethius' Works on Logic I" in *Vivarium. A Journal for Mediaeval Philosophy and the Intellectual Life of the Middle Ages* 2, 1-49; II, *ibid.*, 125-62
- (1967), *Logica Modernorum. A Contribution to the History of Early Terminist Logic*. Vol II Part I: *The Origin and Early Development of the Theory of Supposition*. Part II: *Texts and Indices*. Assen
- (1979), "Facts and Events: The Historian's Task" in *Vivarium. An International Journal for the Philosophy and Intellectual Life of the Middle Ages and Renaissance* 17, 1-42
- (1980), "On Ancient and Medieval Semantics III: The Categories as Classes of Names" in *Vivarium. An International Journal for the Philosophy and Intellectual Life of the Middle Ages and Renaissance* 18: 1-62
- (1981), "Abaelard's Semantic Views in Light of Later Developments" in H.A.G. Braakhuis, C.H. Kneepkens, L.M. de Rijk (eds.), *English Logic and Semantics From the End of the Twelfth Century to the Time of Ockham and Burleigh*. (Ingenium Publishers Nijmegen), 1-58
- (1983), "Did Parmenides Reject the Sensible World?" in Lloyd P. Gerson (ed.), *Graceful Reason. Essays in Ancient and Medieval Philosophy presented to*



- Joseph Owens on the occasion of his seventy-fifth birthday and the fiftieth anniversary of his ordination. Toronto, 29-53
- (1986), *Plato's Sophist. A Philosophical Commentary*. Koninklijke Nederlandse Akademie van Wetenschappen. *Verhandelingen Afdeling Letterkunde*, Nieuwe Reeks, deel 133. Amsterdam
- (1987), "The Anatomy of the Proposition. *Logos* and *Pragma* in Plato and Aristotle", in L.M. de Rijk & H.A.G. Braakhuis (eds.), *Logos and Pragma*. Essays on the Philosophy of Language in Honour of Professor Gabriel Nuchelmans. Nijmegen, 27-61
- (1987a), "War Ockham ein Antimetaphysiker? Eine semantische Betrachtung" in: J.P. Beckmann *et al.* (eds.), *Philosophie im Mittelalter*. Entwicklungslinien und Paradigmen. Felix Meiner Hamburg, 313-28
- (1988), "Categorization as a Key Notion in Ancient and Medieval Semantics" in *Vivarium. An International Journal for the Philosophy and Intellectual Life of the Middle Ages and Renaissance* 26, 1-18
- (1988a), "On Boethius' Notion of Being: A Chapter of Boethian Semantics" in Norman Kretzmann (ed.), *Meaning and Inference in Medieval Philosophy*. Studies in Memory of Jan Pinborg. *Synthese Historical Library*, vol. 32, Dordrecht, 1-29
- (1992), "Causation and Participation in Proclus. The Pivotal Role of Scope Distinction in His Metaphysics" in E.P. Bos & P.A. Meijer (eds.), *On Proclus and His Influence in Medieval Philosophy*. *Philosophia Antiqua* vol. LIII. Leiden, 1-34
- (1995), "Ockham as the Commentator of His Aristotle: His Treatment of *Posterior Analytics*" in F. Dominguez, R. Imbach, Th. Pindl et P. Walter (eds.), *Aristotelica et Lulliana magistro doctissimo septuagesimum annum feliciter agenti dedicata* (The Hague) 77-127
- (1995a), "Ockham's Horror of the Universal. An Assessment of His View of Individuality" in *Mediaevalia. Textos e Estudos* (Madrid) 7-8, 473-97
- (2000) "Logica Morelli. Some Notes on the Semantics of a Fifteenth Century Spanish Logic" in *Acts of the XIth European Symposium on Medieval Logic and Semantics* (Pamplona 1998), 209-24
- (2001a), "Boethius on *De interpretatione*, ch. 3: Is He a Reliable Guide?" in A. Galonnier (ed.), *Boèce ou la chaîne des savoirs*. Actes du colloque international tenu à Paris 8-12 juin 1999. Paris, 511-32
- (2002), "The Logic of Indefinite Names in Boethius, Abelard, Duns Scotus, and Radulphus Brito" in H.A.G. Braakhuis & C. H. Kneepkens (eds.). *The Tradition of Aristotle's Peri Hermeneias in the Latin Middle Ages. Acts of the Xth European Symposium on Medieval Logic and Semantics* (Nijmegen June, 22-26 1992), 207-33
- RIST, J.M. (1989), *The Mind of Aristotle: A Study in Philosophical Growth*. Toronto
- (1996), "On Taking Aristotle's Development Seriously" in Wians (ed.), 359-73
- ROSS, W.D. (1924; <sup>2</sup>1953), *Aristotle's Metaphysics* A Revised Text with Introduction and Commentary. 2 vols. Clarendon Press Oxford
- (1936), *Aristotle's Physics*. A Revised Text with Introduction and Commentary. Clarendon Press Oxford
- (<sup>5</sup>1949), *Aristotle* Methuen London
- (1957), "The Development of Aristotle's Thought" in *Proceedings of the British Academy* 43, 63-78 (repr. in Barnes *et al.* (1975), vol. I, 1-13
- (1961), *Aristotle. De anima*. Edited with Introduction and Commentary. Clarendon Press Oxford
- ROUTILA, L. (1969), *Die aristotelische Idee der ersten Philosophie*. Amsterdam
- RUIJGH, C.J. (1971), *Autour de 'te épique'*. Amsterdam
- (1979), Review Article [in French] of Ch. H. Kahn (1973) in *Lingua* 48, 43-83
- (1984), "Sur la valeur fondamentale de εἶναι: Une réplique" in *Mnemosyne* 37, 264-70
- (1996), *Scripta minora ad linguam graecam pertinentia* II. Gieben Amsterdam

- SCALTSAS, TH. (1994), *Substances and Universals in Aristotle's Metaphysics*. Cornell University Press Ithaca N.Y.
- SCHOFIELD, M. & NUSSBAUM, M. (eds.) (1982), *Language and Logos*. Studies in Ancient Greek Philosophy presented to G.E.L. Owen. Cambridge University Press
- SEDLEY, D. (1997/1998), "Relatività aristoteliche" in *Dianoia*. Annali di Storia della Filosofia I (1997), 11-25; II (1998), 11-23
- SEIDL, H. (1971), *Der Begriff des Intellekts (νοῦς) bei Aristoteles, im philosophischen Zusammenhang seiner Hauptschriften*. Monographien zur philosophischen Forschung, Band 80. Meisenham am Glan
- (1984), *Beiträge zu Aristoteles' Erkenntnislehre und Metaphysik*. Würzburg
- SELLARS, W. (1967), "Aristotle's *Metaphysics*: An Interpretation" in *Philosophical Perspectives* (Springfield Illinois), 73-124
- SHIEL, J. (1958), "Boethius' Commentaries on Aristotle" in *Mediaeval and Renaissance Studies* 4, 216-44
- SHIELDS, C. (1995), "The Subjecthood of Souls and Some Other Forms: A Response to Granger" in *Oxford Studies in Ancient Philosophy* 13, 161-76 (reprint in L.P. Gerson (ed.), 224-36)
- SLOMKOWSKI, P. (1997), Aristotle's *Topics*. Philosophia Antiqua. A Series of Studies on Ancient Philosophy, vol. LXXIV. Leiden
- SLUITER, I. (1997), "The Emergence of Semantics in Four Linguistic Traditions: Part Three: The Greek Tradition" in *The Emergence of Semantics in Four Linguistic Traditions, Hebrew, Sanskrit, Greek, Arabic* [E.F. Konrad Koerner (ed.), *Amsterdam Studies in the Theory and History of Linguistic Science*. Section III: *Studies in the History of the Language Sciences*, vol. 82. Amsterdam/ Philadelphia], 149-224
- SMITH, R. (1982), "The Relationship of Aristotle's Two *Analytics*" in *Classical Quarterly* 32, 327-35
- (1982a), "The Syllogism in *Post. Anal. I*" in *Archiv für Geschichte der Philosophie* 64, 113-35
- (1989), *Aristotle. Prior Analytics. Translated with Introduction, Notes, and Commentary*. Indianapolis/Cambridge
- (1993), "What Use is Aristotle's *Organon*?" in *Proceedings of the Boston Area Colloquium in Ancient Philosophy* 9, 261-85; reprint in L.P. Gerson (ed.) I, 1-19
- (1994) "Dialectic and the Syllogism" in *Ancient Philosophy* 14 (3), 133-51
- (1997), *Topics Book I and VIII with Excerpts from Related Texts*. Translation with Commentary. Oxford University Press
- SORABJI, R. (1980), *Necessity, Cause and Blame*. Perspectives on Aristotle's Theory. Cornell University Press Ithaca N.Y.
- (1981), "Definitions: Why Necessary and in What Way?" in Berti (ed.), 205-44
- (1982), "Myths about Non-Propositional Thought" in Schofield & Nussbaum (eds.), 294-314
- (1983), *Time, Creation and the Continuum*. Theories in Antiquity and the Early Middle Ages. London
- (ed.) (1990), *Aristotle Transformed*. The Ancient Commentators and Their Influence. London
- (1990a), "The Ancient Commentators on Aristotle" in Sorabji (ed.), 1-30
- SPELLMAN, L. (1995), *Substance and Separation in Aristotle*. Cambridge University Press
- SPRUYT, J. (1993), "Thirteenth-century Positions on the Rule 'ex impossibili sequitur quidlibet'" In K. Jacobi (ed.), *Argumentationstheorie. Scholastische Forschungen zu den logischen und semantischen Regeln korrekten Folgerns*. Studien und Texte zur Geistesgeschichte des Mittelalters Bnd 38. Leiden, 161-93
- (2000a), "Gilbert of Poitiers on the Application of Language to the Transcendent and Sublunary Domains" in M. Kardaun & J. Spruyt (eds.), 205-36

- STEINFATH, H. (1991), *Selbständigkeit und Einfachheit. Zur Substanztheorie des Aristoteles*. Athenäum Monografien. Philosophie Bnd 264. Hain Frankfurt am Main
- TREDENNICK, H. (1933), *Aristotle. The Metaphysics*, with an English Translation. Books I-IX. London
- TRICOT, J. (<sup>3</sup>1953), *Aristote, La Métaphysique*. Nouvelle édition entièrement refondue, avec commentaire. Paris
- TUGENDHAT, E. (1958; <sup>3</sup>1982) ΤΙ ΚΑΤΑ ΤΙΝΟΣ. *Eine Untersuchung zu Struktur und Ursprung aristotelischer Grundbegriffe*. Freiburg/Munich
- UPTON, TH. V., (1991), "The If-It-Is Question in Aristotle" in *Ancient Philosophy* 11, 315-30. Reprint in L.P. Gerson (ed.), 101-17
- VERBEKE, G. (1961), AMMONIUS. Commentaire sur le *Peri Hermeneias* d'Aristote. Traduction de Guillaume de Moerbeke. Edition critique et étude sur l'utilisation du commentaire dans l'oeuvre de Saint Thomas. Louvain/Paris
- (1985), "Les apories aristotéliciennes sur le temps" in Wiesner (ed.), 98-122
- VERDENIUS, W.J. (1968), "Notes on the *Topics*" in Owen (ed.), 22-42.
- (1981), "Notes on some Passages from *Posterior Analytics* I" in Berti (ed.), 343-57
- (1985), "The Nature of Aristotle's Scholarly Writings" in Wiesner (ed.) I, 12-21
- VOGEL, C.J. DE (1970), *Philosophia* I. *Studies in Greek Philosophy*. Assen
- WAGNER, H. (1971), "Aristoteles, *De interpretatione* 3, 16b19-25" in R.B. Palmer & R. Hamerton-Kelly (eds.), *Philomathes. Studies and Essays in the Humanities in Memory of Philip Merlan*. The Hague, 95-115
- WAITZ, TH. (1844-46), Aristoteles, *Organon* graece novis codicum auxiliis adiutus recognovit, scholiis ineditis et commentario instruxit Theodorus Waitz. 2 vols. Leipzig. Anastatic reimpression Aalen 1965
- WEDIN, M. (1978), "Aristotle on the Existential Import of Singular Sentences" in *Phronesis* 23, 179-96
- WEIDEMANN, H. (1991), "Grundzüge der aristotelischen Sprachtheorie" in P. Schmitter (ed.), *Sprachtheorien der abendländischen Antike*. Tübingen, 170-92
- (1994), *Aristoteles, Peri Hermeneias*. Übersetzt und erläutert. *Aristoteles. Werke in deutscher Uebersetzung*. Band I, Teil II (Berlin)
- (1997), "Ein drittes modallogisches Argument für den Determinismus: Alexander von Aphrodisias" in *Das weite Spektrum der analytischen Philosophie*. Festschrift für Franz von Kutschera herausgegeben von Wolfgang Lenzen in *Perspektiven der Analytischen Philosophie. Perspectives in Analytical Philosophy*. Band 14, 429-46
- WHITAKER, C.W.A. (1996), *Aristotle's De interpretatione. Contradiction and Dialectic*. Clarendon Press Oxford
- WIANS, W. (ed.) (1996), *Aristotle's Philosophical Development. Problems and Prospects*. Lanham Maryland/London
- (1996), "Scientific Examples in the *Posterior Analytics*" in Wians (ed.), 131-50
- WIELAND, W. (1962; <sup>2</sup>1970), *Die aristotelische Physik*. Untersuchungen über die Grundlegung der Naturwissenschaft und die sprachlichen Bedingungen der Prinzipienforschung bei Aristoteles. 2. durchgesehene Auflage mit einem Nachwort. Göttingen
- (1979), "Aristotle's *Physics* and the Problem of Inquiry into Principles" in Barnes, Schofield, Sorabji (eds.) I, 127-47
- WIESNER, J. (ed.) (1985-1987), *Aristoteles. Werk und Wirkung*. I (1985), *Aristoteles und seine Schule*, II (1987), *Kommentierung. Überlieferung, Nachleben*. Berlin/New York
- WITT, CH. (1989), *Substance and Essence in Aristotle*. An Interpretation of *Metaphysics* VII-IX. Cornell University Press Ithaca N.Y.
- (1996), "The Evolution of Developmental Interpretations of Aristotle" in Wians (ed.), 67-82
- WOLFF, F. (1999), "Proposition, être et vérité: Aristote ou Antisthène?" in Büttgen *et al.* (eds.), 43-65

- WOODS, M.J. (1991), "Universals and Particular Forms in Aristotle's *Metaphysics*" in *Oxford Studies in Ancient Philosophy*. Supplementary Volume: H. Blumenthal & H. Robinson (eds.), *Aristotle and The Later Tradition*, 41-56
- ZADRO, A. (1974), *Aristotele, I Topici*. Traduzione, introduzione e commento. Naples
- ZEKL, H.G. (1997/98), *Aristoteles, Organon*. Griechisch-Deutsch. Band I: *Topik, Über die sophistischen Widerlegungsschlüsse*, Band II: *Kategorien. Hermeneutik*; Band III: *Erste Analytik. Zweite Analytik*. Felix Meiner Hamburg
- ZIMMERMANN, A. (1965, <sup>2</sup>1998), *Ontologie oder Metaphysik?* Die Diskussion über den Gegenstand der Metaphysik im 13. und 14. Jahrhundert. Texte und Untersuchungen. Peeters Leuven
- (1971), "Ipsum enim 'est' nihil est. Thomas von Aquin über die Bedeutung der Kopula", in A. Zimmermann (ed.), *Der Begriff der repraesentatio im Mittelalter* (Miscellanea Mediaevalia 8). Berlin/New York, 282-95
- ZIMMERMANN, F.W. (1981), *Al-Farabi's Commentary and Short Treatise on Aristotle's De interpretatione*. Translated with an Introduction and Notes. Oxford.

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